B 533760
MAY -9 1955

96th year

APRIL 1955
Vol. 182 — No. 4

AMERICAN Gas Journal

ONE COPY SENT TO L.C.

Made to Measure for House Heating Loads...

Presenting

New The Rockwell "250" Aluminum Meter

Capacity 250 cfh (at ½ in. diff. of 0.60 sp. gr. gas)

Weighs less than 15 lbs.

Steel spuds on 6-in. centers.

Oil impregnated powdered bronze bushings throughout.

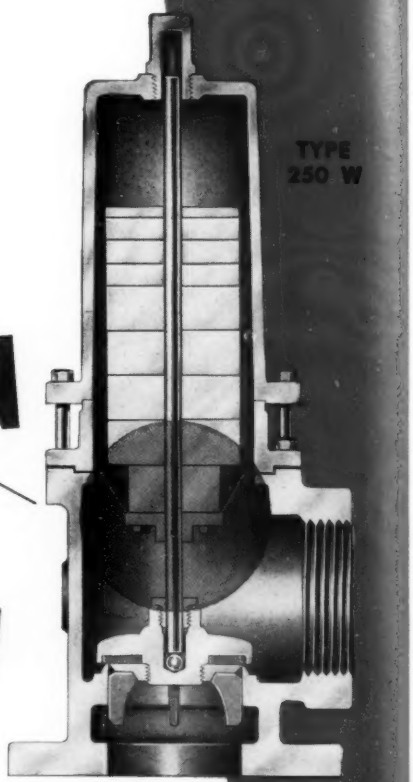
An important addition to the ever-growing line of Rockwell single joint aluminum meters.

MAY 23 1955

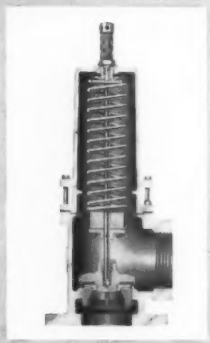
ROCKWELL MANUFACTURING COMPANY
PITTSBURGH 8, PA. Atlanta • Boston • Charlotte • Chicago • Dallas • Houston
Los Angeles • Midland, Texas • N. Kansas City, Mo. • New York • Philadelphia
Pittsburgh • San Francisco • Seattle • Shreveport • Tulsa

YOU CAN RELY ROCKWELL ON ROCKWELL

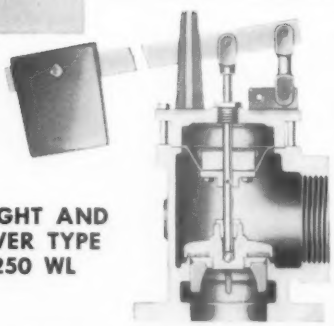
WHAT A DIFFERENCE A "D" MAKES in the NEW CHAPLIN-FULTON High Capacity Safety Valves



"D" stands for diaphragm, and what a difference it makes in the discharge ability of the new Chaplin-Fulton High Capacity Safety Valves—2½ times more flow capacity. After initial opening, the discharge pressure acting upward on the diaphragm insures maximum opening, and guarantees full flow with minimum increase in in the blowing pressure. This means greater protection for the users of Chaplin-Fulton Type 250 Safety Valves, adaptable in three models to all gas systems from ounces to 100 pounds. Sizes 2" to 6" inclusive.



SPRING TYPE
250 S



WEIGHT AND
LEVER TYPE
250 WL

Simple.... Foolproof

ACCURATE DEPENDABLE

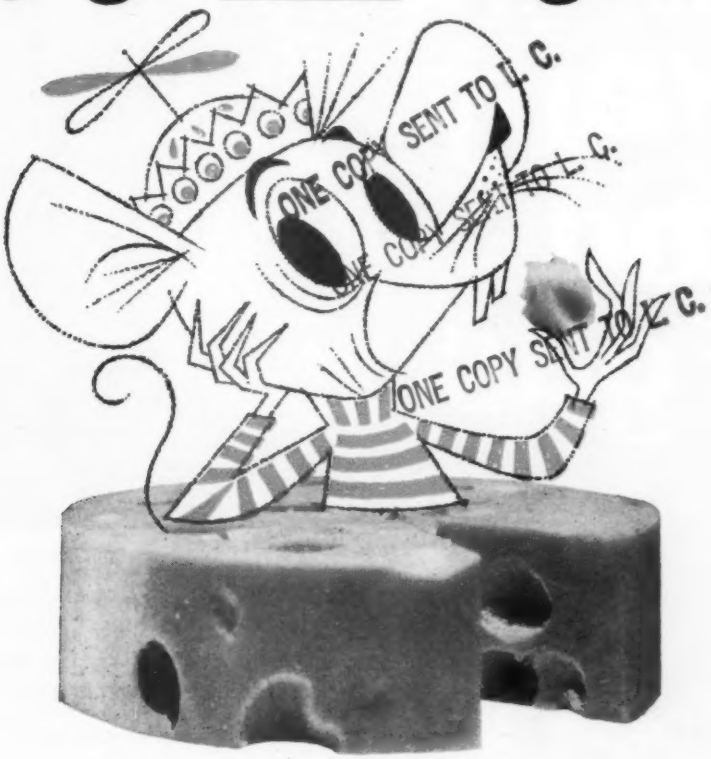
CP MFG. CO.

Chaplin-Fulton
MANUFACTURING COMPANY
Pittsburgh 25, Pennsylvania

SV-53-1

MAY -9 1955

They go best together



The best gas odorant—The best odorant service

Alert "80"—*the best economy priced, quality mercaptan.*

Calodorant "C"—*the best quality cyclic sulfide.*

Today's more demanding operating conditions wrote the specifications for Alert "80." It has been proved in all types of distribution systems, has met every test by large and small utilities. Alert "80" is a selected and blended group of mercaptans with new blending and balancing—giving better, full range volatility and stronger initial "punch."

Calodorant "C" is the only natural gas odorant in use that is completely stable in high pressure lines—at extremely high and low temperatures—performs equally well at medium and low pressures.

Want To Simplify "Room Testing" Procedures?

Oronite's unique Odorometer offers the simplest way to test odor intensities in your distribution system. Ask for a demonstration on your system.

Want to know how to neutralize odorant "spills" or help on how to deodorize drums for re-use or resale? Ask Oronite about this or any other problem you may have—chances are we have already done the research and have the answer.

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MORE RELIABLE METERING with any kind of gas

No matter what type of gas your meters must handle – manufactured, natural, L.P. gas, or combinations – your best bet is Vulcan synthetic diaphragms. They *stay* flexible, durable, leakproof and dependable . . . with *any* kind of gas.

For over 20 years Vulcan has specialized in synthetic diaphragms. Here are the ten important advantages that have resulted from Vulcan's longer experience and close cooperation with the gas industry:

1. **Flexible to permit low differentials.**
2. **Impermeable to prevent the diffusion of gas through the fabric and to accomplish this without periodic attention. Pre-tested at factory.**
3. **Stable under broad ranges of operating conditions.**
4. **Long life without cracking or disintegrating.**
5. **Adaptable to manufactured, natural and L.P. gas, or combinations.**
6. **Practical for installation and storage.**
7. **Uniform in gauge and texture.**
8. **Available in unrestricted supply.**
9. **Clean and dry, requiring no oiling or dressing.**
10. **Economical in original cost and maintenance.**

For complete information on Vulcan synthetic diaphragms, write for a copy of our free brochure: "The Heart of a Gas Meter".

VULCAN RUBBER PRODUCTS, INC.
A subsidiary of Reeves Brothers, Inc.
54 Worth Street, New York 13, N. Y.

VULCAN RUBBER PRODUCTS INC.

Vulcan

SYNTHETIC DIAPHRAGMS — FOR OVER 20 YEARS

AMERICAN
Gas Journal

VOLUME 182 | 96TH YEAR : : APRIL 1955 | NUMBER 4

This month...

MANAGEMENT AND THE STAFF are most appreciative to the many friends of the GAS JOURNAL who have expressed their pleasure on learning that this oldster in the American gas industry is now under new and vigorous direction on all the fronts that constitute industrial publishing.

MAY WE REPEAT our assurances, given in this column last month, that the pages of the GAS JOURNAL will reflect a growingly-sharp perception of the gas industry's requirements for authoritative and useful information on management, operation, utilization and sales. The extent to which we fill those requirements will be the measure of our service to the industry — and that service is the only reason for the existence of our publication.

CORROSION MITIGATION PROGRAMS are getting close attention in all utilities that have long-term operating economies in mind — and, we ask, which companies don't have them in mind? Views on the use of polyvinyl chloride tape by utilities are expressed by a new author in our pages, A. C. Kilberg. His how-to discussions seem to be directly-applicable to many protection problems. Page 14.

EDUCATION IN THE GAS INDUSTRY is getting much broader attention, we are pleased to note. We trust that our readers are well aware of our interest in the college programs, instituted by Gas Appliance Manufacturers Association, for the improvement of effectiveness in the work of appliance dealers and utility salesmen. The latest report of adoptions of the GAMA curriculum is included in this issue. Page 43.

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HOUSE COMMITTEE hearings on Harris-Hinshaw bills (HR 4560, HR 4675) are expected to continue through April. Much has been and will be said for the record, for and against the bills to exempt independent natural gas producers from Federal regulation. Complications — always a high Washington potential — might as well enter picture and delay clearance by House rules committee and, thereby, a decisive vote.

NEW YORK'S governor can be expected to give voice and favor to the continued regulation of natural gas production — a voice, incidentally, that bears too-close resemblance to what is often called The Voice.

ONE COUNT of congressional bills taking sides in battle of regulating natural gas production: 22.
ODOR ELIMINATION from its plants accounts for yearly bill of $1-million paid by Proctor & Gamble. We're going to investigate reported techniques for keeping odors below threshold for possible modification in gas industry odorization techniques.

GROSS NATIONAL PRODUCT, in 4th quarter of 1954, hit annual rate of $362-billion. While 1st quarter of 1955 has not been estimated officially, Guaranty Trust Company of New York holds opinion that "it seems certain that a further rise must have occurred. The chances are . . . very close to the all-time peak . . . second quarter of 1953 . . . which . . . many people did not expect . . . this year."

RETAIL SALES this year, with and without $'s spent for automobiles, have been running well ahead of 1953 and 1954; latest recorded monthly total: cat's whisker under $15-billion.

FAVORABLE TREND in retail sales, says Guaranty Trust, due to larger incomes, more use of credit and declining rate of savings.

CONSTRUCTION ACTIVITIES still being characterized as booming; crest has not yet been defined.

ELECTRIC POWER PRODUCTION with nuclear reactors as heat sources in generating plants is picking up momentum— despite laughs from *some* gas utility executives following a GAS JOURNAL editorial (October 1954). We do not . . . repeating, DO NOT . . . want to laugh in reply!

UNEMPLOYMENT in 1954 was estimated at 5.0% of total employables, says The National City Bank of New York. That is below average of 7.2% for 1900-53; drop 10 war years during that period and average for 44 so-called peace years is 8.4%; then drop 11 depression years for 33 non-depression peace years average of 4.3%.

HIGH TEMPERATURE metals, capable of structural and mechanical efficiency at temperatures of at least 2,000 F, are coming closer. Intended initially and primarily for turbine blades in jet engines, these metals will have direct applications in utilization of gas for industrial processes.

HOLIDAY MONDAYS to give some of us 3-day weekends, 5 of them a year, is movement now afoot. Massachusetts legislature has approved it; other states are considering

INDEPENDENCE DAY on any date but July 4? Declaration of Independence was adopted July 2, vote did not become unanimous until July 19 John Hancock's signature went on July 4. (Add this to department-of-seldom-used-information.)

CHANGE YOUR MIND if (indeed) you wished you worked and lived in New York area. Some otherwise-idle statistician says average (?!) New Yorker spends 480 hours a year traveling to-and-from his job. That works out to 60 workdays, if you're interested.

MORTGAGE LOANS outstanding on 1-to-4 family nonfarm homes zoomed to $75-billion at end of 1954, from $18.5-billion at end of 1945. The 1953-to-1954 gain amounted to nearly $9-billion, says The Cleveland Trust Co.

GENERAL RATE INCREASE of 15% is being sought by Atlanta Gas Light Co., in application to Georgia commission. Reason given: to offset cost of purchased gas.

TRANS-CANADA Pipe Lines, Ltd., has put its 2,250-mile project in the deep-freeze for a year, at least, and maybe for keeps. The $300-million-plus line (GAS JOURNAL, March 1955) skidded out of control late last month. Canadian Gulf refused to sell gas — about ⅓ of required volume — to Trans-Canada when Dominion-owned Industrial Development Bank responded to Trans-Canada's request for financial aid with plan that would have put project under the bank's control. Reports indicate Dominion government wanted line to be all-Canada as well as trans-Canada, and opposed lateral to Minneapolis-St. Paul area.

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MUELLER®

GAS CURB STOPS

No-Blo Steel Valve

Ideal for all-welded steel service lines . . . machined from solid steel forging for excellent weldability . . . also available with inside or outside I. P. threads . . . "O" Ring Seals prevent leakage to outside . . . line contact of metal-to-metal seat assures perfect shut-off.

DEPENDABLE WITHOUT MAINTENANCE

Higher gas service pressures have sharpened the need for long-life, dependable curb stops; stops that are gas tight under all conditions, that are easy to operate, that provide positive shut-offs and do not require periodic maintenance.

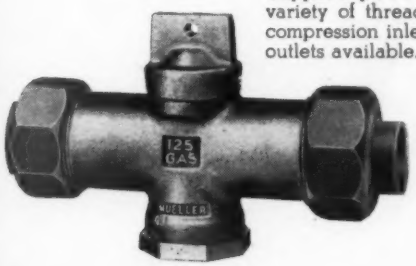
A full line of gas curb stops — which meet all of these requirements and include many "exclusive" features — has been developed by Mueller Co. and are available as stock items. A few of the major types are shown.

Be sure to consult your Mueller Representative, Catalog G-97 or write direct for complete details and specifications on the curb stop that will fulfill your needs.

Fully Warranted

Inverted Key Curb Stop

Key is seated by stainless steel spring and line pressure . . . slight down pressure unseats key for easy turning . . . "O" Ring Seals, top and bottom, prevent leakage to outside . . . shown at left with recessed inside I. P. thread inlet and outlet . . . shown below with Dresser Style 90 Insulating Coupling inlet and outlet for Type "K" Copper Pipe . . . wide variety of threaded or compression inlets and outlets available.



NO-BLO

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Dependable Since 1857

MAIN OFFICE & FACTORY DECATUR, ILLINOIS

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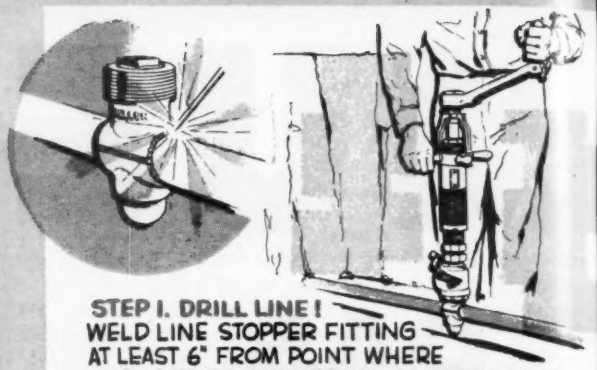
NO-BLO

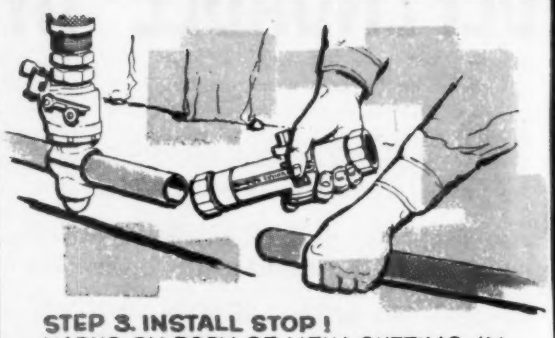
Method

with a *NEW* Cutting-In

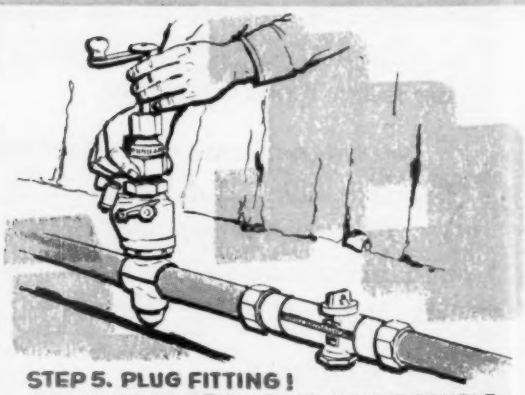
INSTALLS CURB STOPS SAFELY...



STEP 1. DRILL LINE!
WELD LINE STOPPER FITTING AT LEAST 6" FROM POINT WHERE LINE IS TO BE CUT. ATTACH CONTROL CHAMBER OR GATE VALVE TO FITTING AND MAKE CUT COMPLETELY THROUGH LINE. DRILLING MAY BE DONE WITH EITHER AN "E-4", "T", "D-4" OR "DH-2" MACHINE, DEPENDING ON SIZE. ("E-4" AND CONTROL CHAMBER ARE SHOWN)

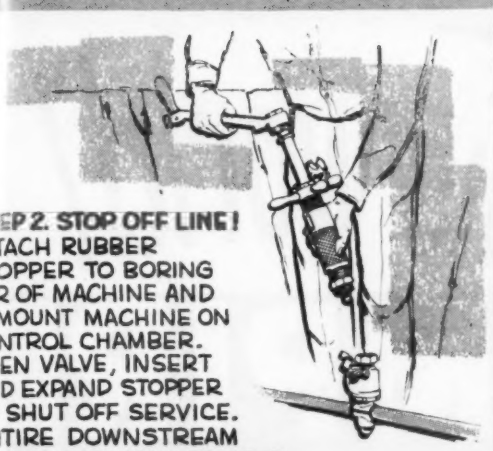


STEP 3. INSTALL STOP!
MARKS ON BODY OF NEW CUTTING-IN CURB STOP INDICATE LENGTH OF PIPE SECTION TO BE REMOVED. (EXISTING CURB STOP, IF ANY, SHOULD BE INCLUDED) SLIP LONG END OF NEW STOP ONTO UPSTREAM SECTION OF PIPE. ADVANCE STOP OVER RE-ALIGNED DOWNSTREAM SECTION AS FAR AS POSSIBLE.



STEP 5. PLUG FITTING!
ATTACH COMPLETION PLUG. MOUNT COMPLETION MACHINE ON CONTROL CHAMBER. OPEN VALVE. SCREW PLUG TIGHTLY INTO FITTING. RELEASE BORING BAR FROM PLUG. REMOVE MACHINE AND CONTROL CHAMBER.

This is another of a series showing the broad application of Mueller No-Blo Fittings and Machines used for their installation.

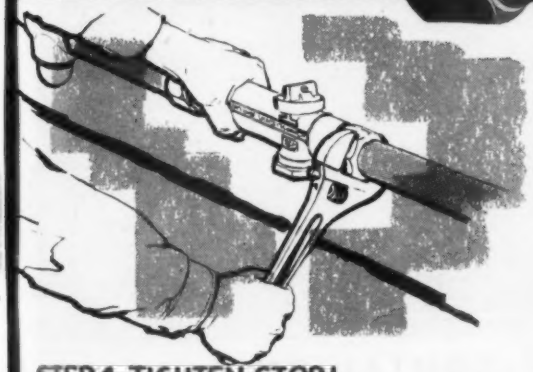


STEP 2. STOP OFF LINE!
ATTACH RUBBER STOPPER TO BORING BAR OF MACHINE AND REMOUNT MACHINE ON CONTROL CHAMBER. OPEN VALVE, INSERT AND EXPAND STOPPER TO SHUT OFF SERVICE. ENTIRE DOWNSTREAM SECTION IS NOW ISOLATED PERMITTING SAFE INSTALLATION OF NEW CUTTING-IN CURB STOP.

Curb Stop

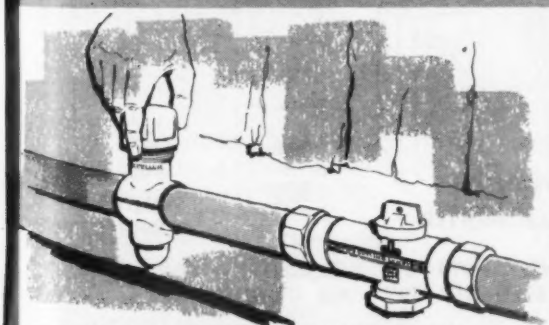
New Cutting-In Curb Stops are of the same design and construction as time-proven Mueller Inverted Key "O" Ring Curb Stops—125 p.s.i. . . . flat head . . . iron body . . . bronze key . . . straight way.

H-11435 Sizes ¾" through 2"



STEP 4. TIGHTEN STOP!
STOP IS NOW CORRECTLY POSITIONED AND CANNOT BE MOVED BY PRESSURE WHEN STOP IS CLOSED. TIGHTEN DRESSER COUPLING NUTS FIRMLY. CLOSE STOP. RELEASE AND WITHDRAW STOPPER AND CLOSE VALVE.

Install these new Cutting-In Curb Stops without shutting off at the main, or replacing a section of the service line—only one excavation needed. Shut-off is made with a No-Blo Service Line Stopper Fitting and the Cutting-In Curb Stop is installed as shown. Ideal for replacing worn or damaged curb stops or for making new curb stop installations.



STEP 6. COMPLETE INSTALLATION!
TIGHTEN COMPLETION PLUG, SCREW COMPLETION CAP ON TOP OF LINE STOPPER FITTING AND INSTALL A MUELLER CURB BOX AND COMPANION FOOT PIECE ON NEW CURB STOP. INSTALLATION IS NOW COMPLETE—QUICKLY AND SAFELY, UNDER PRESSURE, WITH NO BLOWING OF GAS.

For full details on Cutting-In Curb Stops and Service Line Stopper Fittings or related No-Blo Fittings and Machines, consult your Mueller Representative, Catalog G-97 or write direct.

MUELLER CO.

Dependable Since 1857

MAIN OFFICE & FACTORY DECATUR, ILLINOIS

NOW... NEW!

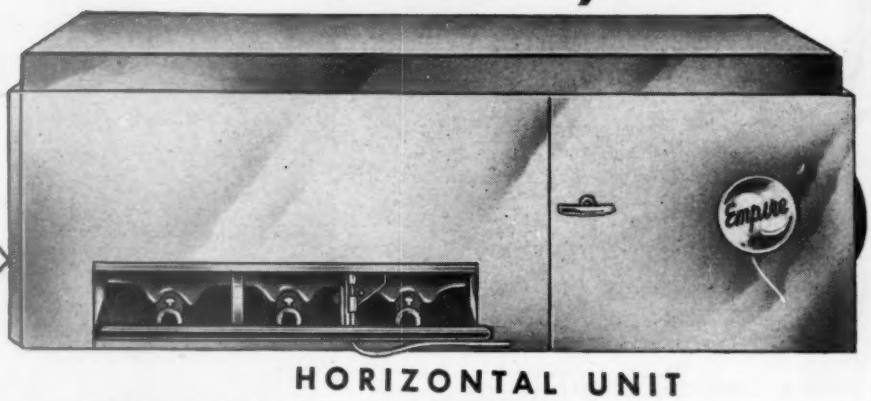
nothing like it in this world!

EMPIRE

MAKES THE BEST *Gas* HEATING APPLIANCES IN THE WORLD

✓ BASEMENT
✓ UTILITY ROOM
✓ CLOSET

There's **NO DOUBT** *about it!*
Priced right too!



HORIZONTAL UNIT

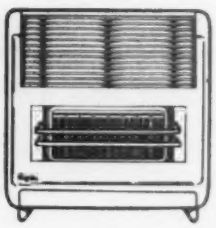
MOST EFFICIENT *Gas* BURNER MADE

SILENT IN OPERATION

MINIMUM FIELD SERVICE

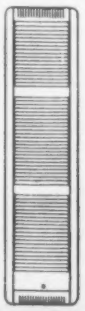
DEALERS ACCEPTANCE

USER SATISFACTION

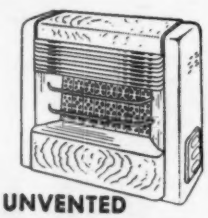


Gas CIRCULATOR HEATER

Gas FLOOR FURNACE



ZONE CONTROL RECESSED HEATER



UNVENTED *Gas* HEATER

COUNTER FLOW AIR CONDITIONER

WINTER AIR CONDITIONER

EMPIRE

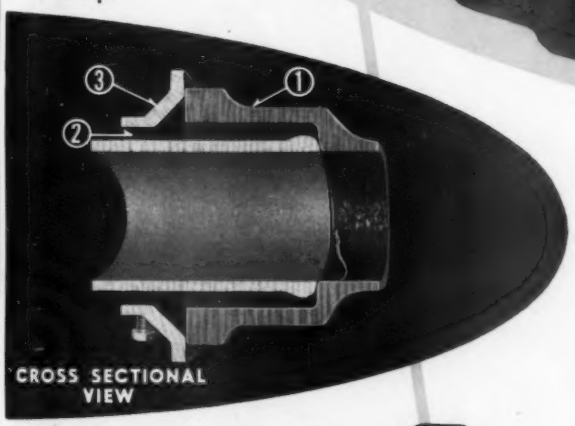
STOVE COMPANY

BELLEVILLE, ILLINOIS

WORLD'S LARGEST MANUFACTURER OF *Gas* FLOOR FURNACES

Simplified Bell Joint Clamps

1. Bell joint
2. Perma-Seal Compound
3. Bell joint clamp



SEALED BY ADHESION

WITH PERMA-SEAL COMPOUND

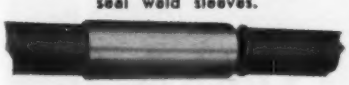
WITH THE FOLLOWING ADVANTAGES:

- Smaller street openings required because no excavating or cleaning necessary in back of the bell.
- The clamp does not require adjustment, or filling and facing of the bell.
- ***The clamp is engineered to fit all variable pipe wall thicknesses without adjustment and to fit all types of bell joints including sleeves, drip pots, valves and odd size pipes.*** Available sizes: 3" to 36" diameter.
- This clamp fits in confined areas because it requires no greater area than the existing bell for installation.
- ***This leak clamp becomes a seal by adhesion rather than by compression.***
- This clamp allows ground movement and vibration to take place without the danger of leaks after installation.
- Once installed the joint becomes trouble-free and permanent.

Write: for full information and prices about the Newest Method in Pipe Connections

New Perma-Seal and Safety Seal Weld sleeves available for steel to steel, steel to cast iron, split sleeves for repair of steel pipe, and completely insulated sleeves for corrosion control.

Typical installation in the removal of valve and replaced with safety seal weld sleeves.



Steel to steel sleeve

Cast to cast sleeve

UNITED PIPE UTILITY SUPPLIERS, INC. BOX 777, BELOIT, WISCONSIN

SOUND *Cornerstone* FOR YOUR NEW PLANT

Ebasco's half century of experience is a solid foundation on which to base the new plant you are considering today.

In that time Ebasco has engineered and constructed *more than two billion dollars of new plants*, large plants and small, in the United States and abroad, built for many different industries. Each bears the unmistakable stamp of the skill and integrity of Ebasco specialists; each is an example of *quality* engineering and construction.

Your new plant, too — whatever its size or function — will benefit from the broad experience which Ebasco will apply to every aspect of the project — from site selection and preliminary planning, through detailed designs and finished construction, to successful and economical operation.

For more information about our services, write for "The Inside Story of Outside Help." Address: Ebasco Services Incorporated, Two Rector Street, New York 6, N.Y.

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George L. Chapman, Wolverine attendant at Hammond, Indiana, transmits pipeline operations data to New York over a Bell System teletypewriter circuit

"Bell System furnishes us dependable communications at a price we can't equal"

—says Cyrus S. Gentry, President of the Wolverine Pipe Line Co.

Flexible, low-cost communications is what Wolverine Pipe Line Company is getting by renting private line teletypewriter service from the Bell System.

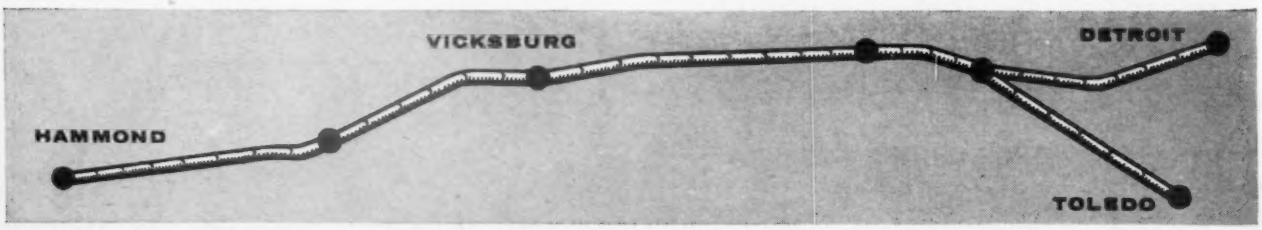
From Hammond, Indiana, products are started along the 295 miles of 16-inch pipe line to Detroit and Toledo. By using a Bell System teletypewriter circuit the operator starts or stops the big high-pressure pump at Vicksburg, 125 miles away.

Hundreds of miles east in New York, a dispatcher keeps round-the-clock watch over the Wolverine Pipe Line's seven stations. He gets reports and sends orders over Bell System teletypewriters.

"The expense of a privately owned system would be far in excess of a rented circuit," says a Wolverine official.

To find out how your communications efficiency could be improved, and costs lowered by using Bell System service, ask your Bell Telephone representative.

BELL TELEPHONE SYSTEM



Editorial . . .

Maybe They Want More Than Just Appliances

WHEN Junior was given a new pair of trousers, recently, his properly-appreciative but less-than-jubilant reactions were thought-provoking—even in matters pertaining directly to the gas industry.

Junior received a pair of corduroys; his real preference was for blue jeans.

Now, the trousers fit, they were blue—but they were not blue jeans. He explained it all—he's very capable, that way—and it was completely understandable: denim blue jeans gave him the feeling of being a truck driver, cowboy or any other part in which he might be cast at a given moment. Corduroys just didn't make it. (Yes, he did get the blue jeans.)

Junior certainly is a consumer. In either case, he would have had a pair of pants. But, he felt that one would do the job more to his spiritual satisfaction than the other. And that mattered greatly to him.

We're fully aware that there has been at least some study of consumer-preferences, in such considerations as operation, styling, arrangement, size and price of gas appliance. With no thought to wave off that study, however superficial it may be, we contend that it is not of the exhaustive character that it should be to know firmly which is preferred, denim or corduroy —and, of course, it's not that simple.

Spiritual satisfaction is of importance to every human, regardless of intellectual level.

That satisfaction, if the preferences were probed for, might very well be brought about by some departures from present practices in operation, styling, arrangement, size and price of gas appliances. And, those departures might very well give gas appliances some dominant competitive considerations that would be quite aside from gas-or-electric-and-price.

The job of probing for, interpreting, analyzing and summarizing the points of consumer-preference is not one to be undertaken by just any survey force armed with a statistician's questionnaire. That sort of study WOULD NOT come up with the kinds of information we contemplate here.

No, going after the deep-down, unformed and probably subconscious points of consumer-preference that would give the appliance manufacturers and the entire gas industry very substantial information starts with experts whose specialty is the human mind.

Quite obviously, the character of study that would make revelations such as these should be an industry study, rather than an isolated study by one manufacturer or the uncoordinated studies of several manufacturers.

The objective in this discussion is to give the *entire* industry the edge; not to give one or more manufacturers a doubtful edge over others within the industry. And, to make it indelibly clear, we note that any edge that can be sharpened by and for gas appliance manufacturers is sharpened for gas utilities at the very same time.

Certainly, we do not sit writing this enlargement of the corduroy-or-denim story with anything that resembles an idea as to *how* such an industry study should be made or who should make it. But—we do have the feeling that it should be *made*.

In itself, a psychological study of what consumers really want would be a departure from the usual market studies in the gas industry. It is an area of sales development that, for gas industry purposes, has never been touched.

If the executives . . . manufacturer and utility . . . are not averse to saying, just among themselves, that SHARPLY-INDICATED CHANGES, from established or pet concepts, hold high competitive potentials—if they are not averse to saying that and then doing something about it, then it would seem that sales development information stemming from the deeper recesses has an incalculable value in this most competitive existence that is ours.

Nelson W. Carlson

How Polyvinyl Chloride Tape Is Used in Corrosion Mitigation Programs

by A. C. Kilberg
Sales Manager, Pipe Protection Products
Minnesota Mining & Manufacturing Co.

CORROSION MITIGATION TECHNOLOGY undoubtedly is advancing more rapidly now than ever before. New techniques and new materials make the engineer's problem less difficult.

Early in 1948, several prominent corrosion engineers reasoned that the properties which made polyvinyl chloride tape excellent for electrical applications would also make it highly desirable as a pipe protection tape. After soil tests and other accelerated laboratory tests had indicated its merits, several companies requested a wider plastic electrical tape than ordinarily manufactured. The first actual applications were made by several large gas distribution companies early in 1949.

A. C. Kilberg

Experimental applications continued, and the tape found its way into the specifications of a number of pipeline companies and distribution systems. This use spread to above-ground applications under conditions of high corrosion. By early 1953, the use of polyvinyl chloride tape had grown to the point where, as far as our company was concerned, a separate organization was formed to develop pipeline products, furnish technical services and promote sales of the materials.

Polyvinyl chloride resin essentially is a reaction-product of acetylene and hydrogen chloride. These chemicals, after final stages of polymerization, produce a resin which is compounded with plasticizers and stablizers to produce many of the familiar vinyl products. After compounding, the vinyl film is formed in a calendering operation.

The pressure-sensitive adhesive on pipewrap tape is essentially a rubber-resin mixture. In producing pipe tape adhesive, there are such considerations as high initial tack, non-corrosiveness, excellent resistance to micro organisms, acids, alkalies and water, and the tendency for an adhesive to age and change quality.

The original polyvinyl chloride electrical tapes were improved for exclusive use in pipe wrapping. Recently, the 3M Company announced the availability of a complete new polyvinyl chloride tape, designed exclusively for corrosion applications. Even this tape is not considered as the final development in pipe protection tapes.

AMERICAN Gas Journal FEATURE

GAS UTILITIES use 10 mil polyvinyl chloride tape because of its greater conformability, especially where close adhesion to fittings is essential.

Unfortunately, it is difficult to set up exact and overall specifications for the application of polyvinyl chloride tape. There is the problem of the differences in gas industry applications — the differences between applications on pipelines and on gas distribution systems. What may be practical for one is not necessarily applicable to the other. It is possible, however, to set up some general rules.

Pipe condition for satisfactory taping

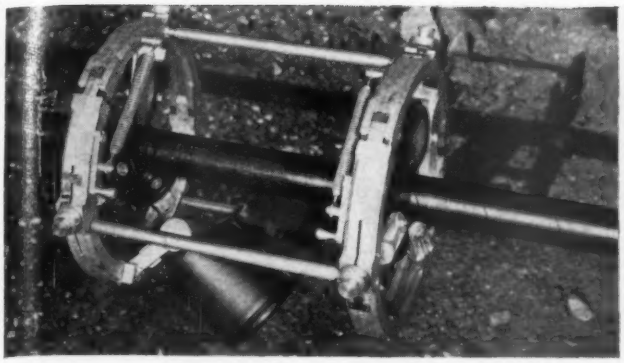
Here are recommendations on the condition of pipe, prior to the application of polyvinyl chloride tape:

1. The pipe should be dry.
2. Dust films should be removed.
3. Grease and oil should be removed.
4. Excessive and loose rust and dirt on old pipe should be wire brushed or cleaned by any other equally effective method and, preferrably, primed.
5. Rough metal, such as weld splatters should be removed.

Pipe should not be wet when tape is applied, because the adhesion of the tape to the pipe will be reduced considerably. Thin moisture films can be removed by wiping, but it is more practical to eliminate moisture by priming the pipe. A good pipe primer will entrain moisture and carry it off with the evaporating solvent.

There is some belief that moisture under an application of polyvinyl chloride tape will result in corrosion, but work conducted in the 3M laboratory and tests by a number of engineering firms indicate that even though water does exist between the small section of pipe and the tape, there is still a complete insulator around the pipe.

Rapid and continued galvanic action cannot take place without the depolarization of cathodic areas on the pipe. This depolarization cannot take place unless oxygen also is present. Assuming small amounts of water and oxygen were trapped under the tape, it is immediately apparent that these will be consumed during the first stages of superficial corrosion. Its effect can be demonstrated in the salt crock test, where a small amount of moisture may gather at the tape lap. After the tests have been completed and the tape removed, a spiral of superficial corrosion may exist where the tape lap occurred. Although the test is contined for an indefinite length of time, this corrosion does



HAND-OPERATED taping machine is recommended for larger jobs of wrapping small-diameter pipe. As machine revolves around pipe, it progresses along length at constant rate, with tape roll angled to give uniform wrapping.

PIPE THREADER is used here for fast and uniform application of polyvinyl chloride tape. The operator holds 20′ roll while threader turns pipe and pulls tape. Time saving over hand-wrapping, 75%.

not increase. It is possible to develop a hole in the wall of an ordinary 2″ steel pipe in less than 30 days by using salt crock test conditions, if one small area of the pipe is exposed. This assumes that the pipe is made anodic.

Grease and oil should be removed from the surface of a pipe using a suitable solvent before polyvinyl chloride tape is applied. Pressure-sensitive adhesive is a combination of rubber and resin, and hydrocarbons will attack the rubber. This matter will be discussed more fully later.

Dust films are a matter of degree. It is possible to completely destroy the adhesive properties of the tape by dusting enough talcum powder on it. While one would not expect this condition in the field, it is conceivable that a pipe could have enough dust on it to cut down tape adhesion considerably. An old pipe installation that is grit-blasted or wire brushed *definitely* should be wiped with a cloth containing some suitable solvent, such as alcohol. Here again, a preferable method is to use a primer which will completely entrap the dust particles and present an ideal surface for tape application.

Sharp particles of metal, such as weld splatters, should be removed when taping welded joints of pipe. These can be smoothed or removed with a ball-peen hammer or an axe. For extra protection, it is highly advisable to cover weld beads with one extra strip of tape before beginning the main application.

Priming can be avoided

If clean, dry pipe can be insured, tape without primer can be applied very satisfactorily. In indoor applications, it is seldom necessary to prime pipe. One exception might be old pipe where wire brushing has been necessary to remove old coatings and corroded surfaces.

In outdoor applications, it is difficult to insure clean, dry pipe; particularly on large jobs done under contract. Just as it is standard practice to specify a primer before coal tar applications to pipe, it probably will become standard practice to specify a primer before applying polyvinyl chloride tape.

Several good primers are available; a new primer, developed by the 3M Company, has just been introduced. Any primer used with polyvinyl chloride tape should be a fast drying, high wetting solvent type primer. Although the primer dries rapidly, it should also have the additional property of maintaining its viscosity over long periods of exposure. This reduces the problem of intermittent application. Primers used should adhere well to coal tar, as well as steel. Any primer used should be capable of absorbing dust, as well as superficial moisture. Carefully selected solvents carry off moisture as the solvent evaporates.

A frequent question involves the use of 10 mil tape or 20 mil tape. It is impossible to make a set of recommendations because of the factors which must be considered. For instance, diameter and weight of pipe, backfill condition, and control of backfilling operations, are a few. Also, will the work be supervised closely? What kind of cathodic protection system will be employed? In aboveground installations, will it be subject to abrasion, or does it have reasonable protection? When a combination of these factors is considered carefully, and tests are made in a few instances, a corrosion engineer can usually decide for himself which type of tape is more advisable.

Engineers, having the problem of protecting underground piping in new construction, indicate that they consider the extra protection afforded by 20 mil tape is worth the additional cost. Under such conditions, short runs of straight pipe should be protected with 20 mil tape. One large refinery in the Southwest specifies 20 mil tape on all large overhead piping because workmen walk on the pipes during maintenance operations.

In general, it is advisable to use 10 mil tape whenever possible in protecting fittings and irregular contours. It is for this reason that most gas utility companies use more 10 mil tape. Since the 20 mil tape does not have as much conformance, it is more difficult to wrap over fittings. All polyvinyl chloride material tends to recover its original length; 20 mil tape, over-stretched in application, has more recovery power. This may result in slipping or gapping. If excessive abrasion or poor backfill conditions are anticipated, double laps of 10 mil tape are advisable.

Can polyvinyl chloride tape be wrapped on pipe which is to be driven under streets or driveways? It has been done — but there are certain precautions which are necessary. Rarely, is a pipe greater than 4″ in diameter handled in this manner. It is obvious that the tape should be applied in the direction that will give lap protection to the previous layer as the pipe is driven through the soil. In all cases, a 20 mil tape should be used. Of course, the pipe must be driven with a pipe point.

HERE, pipe is wrapped as it is revolved by simple hand-crank.

How to machine-wrap

If considerable pipe of less than 2″ diameter is to be wrapped, there is no question about the advisability of purchasing an automatic taping machine. Not only does it increase speed, but it also makes even applications.

On small building jobs, a threading vise and hand crank is a practical tool for wrapping tape. The pipe is revolved in the vise, and the roll of tape is held in both hands so that it can revolve over a sturdy paper tube used in packing the tape. As the pipe revolves, the worker walks alongside, holding the tape at the proper angle. This method of application also permits wrapping pipe in convenient locations and positions. After the pipe lengths have been connected in the ditch, small areas around the couplings can then be taped easily.

Unless the job is large, it is difficult to justify the purchase of a machine to wrap 4″, 6″, or 8″ pipe. Hand application is simple and rapid on small jobs; one man can wrap 4″, 6″, or 8″ pipe without difficulty. Most contractors use 2 men on pipe larger than 8″ in diameter, so that the tape can be passed from one side to the other.

Turn to page 35—POLYVINYL

Magic of 'Natural Gas' in New England Has Gone—Wright Tells NEGA Meeting

FRANKNESS, with which there will be wide agreement and wide disagreement, marked the address of Roy E. Wright, president, New England Gas Association, and director of gas sales, New England Gas & Electric Association, during last month's NEGA annual meeting.

"The magic name of 'natural gas' which our competitors had feared — to which our customers looked forward in anticipation— which was to be the vehicle through which we were to open up a vast new market — which was to be the salvation of the New England gas industry — has disappeared," Mr. Wright punctuated early in his address.

"Its value to the public has been lost."

The security of the New England gas industry, he told his audience, depends upon the ability of the utility companies to sell gas in "heretofore unknown quantities." That objective is a matter of necessity, not necessarily one of choice, he commented.

"Where else can we obtain the revenues to meet the ever-increasing costs of doing business . . .," he asked. "Where else will many companies obtain the money to pay the demand charges on the gas they contracted to buy in the next 4 years?"

Many 5-year forecasts in New England, he noted, were set up at a time when the companies anticipated a lower purchase price of natural gas, which would have made possible lower rates to the consumer.

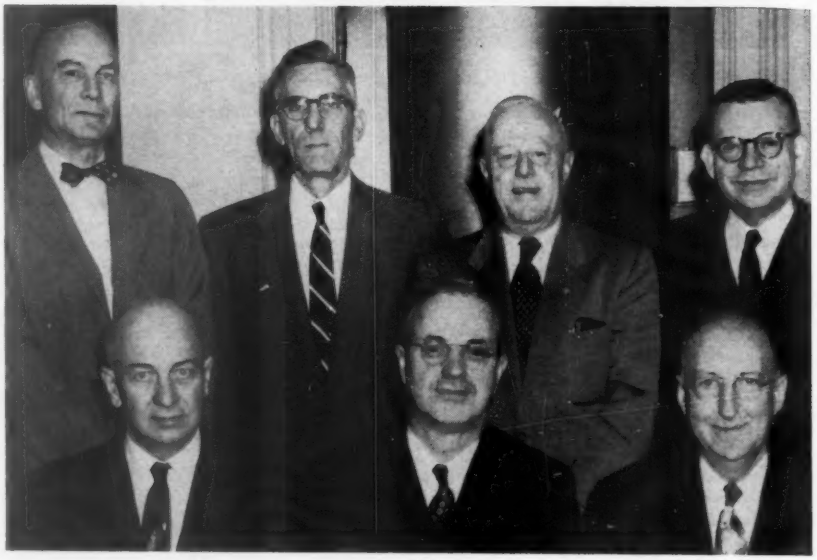
"In many places," he continued, "the gas rates are higher than competitive fuel prices. A market that could have been ours for the asking has been lost. The gas industry has missed an opportunity which will probably never come again . . . but I hasten to add that it was not the fault of the distributing local gas utilities. They were just as helpless as the consumer public."

"If the producers and transmission companies want and expect the support of the gas industry, they had better start to think in terms of the gas industry and not alone of their segment of the industry," he stated.

"Whether we, or they, like it or not, the facts are that our problems are their problems, and their problems are our problems.

"Cooperation is a 2-way word. Any increase in the price of natural gas in New England resulting in increases in gas rates to the consumer would perilously affect our

New England Gas Association Officers — 1955-56



Front row (L-to-R):
Harold E. Ayer, NEGA president, and vice president in charge of operations, Lynn Gas & Electric Co.; Roy E. Wright, retiring president, and director of gas sales, New England Gas and Electric Association Service Corp.; Fred H. Faulstich, 1st vice president, and vice president, Springfield Gas Light Co.

Back row (L-to-R):
Clark Belden, clerk, and managing director, NEGA; Edgar G. Rhodes, 2nd vice president, and president, The New Britain Gas Light Co.; Otto Price, treasurer, and vice president, Boston Consolidated Gas Co.; H. Coleman Moore, Jr., asst. treasurer, and vice president and treasurer, NEGEA Service Corp.

NEGA OPERATING PANEL (L-to-R): Michael Anuskiewcz, Jr., engineer, Brooklyn Union Gas Co.; Claude S. Hazel, asst. manager, customers service department, Philadelphia Gas Works division, UGI; Edgar G. Rhodes (moderator), president, New Britain Gas Light Co; Charles E. Utermohle, Jr., asst. superintendent, gas distribution, Consolidated Gas Electric Light & Power Co. of Baltimore; Edward F. Kennedy, general superintendent, production and distribution, gas division, New England Electric System; John L. Turnan, superintendent, plants & transportation, Worcester Gas Light Co.

NEGA SALES PANEL (L-to-R): Gordon G. Howie, vice president and general manager, Cambridge Gas Light Co.; William J. Schmidt, asst. vice president and general sales manager, Long Island Lighting Co.; J. J. Quinn (moderator), vice president, Boston Consolidated Gas Co.; Donald K. Smith, manager, gas heating sales, Rochester Gas & Electric Corp.; Gardner L. Bristol, president, Greenwich Gas Co.; J. J. Fahey, vice president, Haverhill Gas Light Co.

Gas Industry NEWS

competitive fuel position. It might be the cause of losing a market that we have struggled valiantly to obtain at great expense.

"If this should happen," Mr. Wright went on, "it not only would affect the financial stability of the distributing companies but would likewise affect the transmission and producing companies. It would force the distributing companies to turn to other sources of supply . . ."

The growth of NEGA activities was summarized for the membership by Clark Belden, managing director, with emphasis on the benefits that have been derived by the companies through the attendance of their staff members at specialized discussion meetings throughout the year.

One entrant in the NEGA contest for essays on "What the NEGA means to me and thus to my company," revealed that his attendance at a discussion meeting resulted in a specific saving of $50,000.

Mr. Belden noted that 43 points had been made by the various entrants in the contest.

Current operating problems were the subject of one panel, consisting of 3 men from outside New England and 2 from New England.

In the discussion of reduction of unaccounted-for, the panel considered the use of joint lamps, sealing compounds and pipe protection. Also, surveys to discover leaks and general economics of unaccounted-for were discussed.

Various methods of oil fogging and humidification were fully probed while the panelists were on the subject of gas conditioning.

Problems of summer lay-up and winter start-up, when using oil gas in the distribution systems, revealed a wide variety of practices, with many of the audience perplexing the panel members with their individual problems.

The operating and sales panels are shown on these pages.

The other panel, dealing with commercial, industrial and residential sales problems, was made up of 2 men from outside New England and 3 from New England companies.

Full discussions, with questions from the floor, were presented during this panel session.

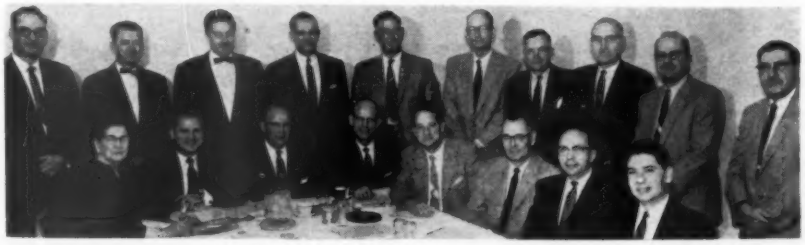
Viewpoints, on commercial gas, included those relating to cooking, water heating and space heating. Special attention was given to hospitals, as a gas load.

Industrial gas, as usual, was discussed from 3 angles: Firm, seasonal, and interruptible.

Appliance rentals, a growing trend in New England with a number of plans, was given specific attention in the residential sales discussion. Dealer cooperation, promotion, load retention and selling manpower came in for their respective shares of discussion.

CLEAVER-BROOKS ADDS CANADIAN VEEP

Cleaver-Brooks Co. has appointed H. F. Clarke (B.C.) Ltd. as manufacturers' representative for the sale of Cleaver-Brooks boiler equipment in British Columbia and the Yukon Territory.



Southwestern Measurement Short Course at University of Oklahoma This Month

General committee of Southwestern Measurement Short Course is shown at recent Dallas meeting while arranging final details of the course, given at Norman, Okla., this month.

Standing, L-to-R: W. A. Griffin, Daniel Orifice Fitting Co.; Howard S. Gray, Tennessee Gas Transmission Co.; Gordon W. Swinney, Phillips Petroleum Co.; E. L. Stark, Foxboro Co.; D. H. Lindsey, Northern Natural Gas Co.; T. J. Kirkpatrick, Panhandle Eastern Pipe Line Co.; Roy S. Peace, Jr., Southern Natural Gas Co.; M. D. Gilbert, Rockwell Manufacturing Co.; R. R. McCafferty, Pioneer Natural Gas Co.; Charles D. Peterson, Universal Controls Corp.

Seated, L-to-R: Kate A. Niblack, Oklahoma Utilities Association; K. R. Tibbetts, Warren Petroleum Corp.; W. H. Carson, University of Oklahoma; Roland O. Cox, Lone Star Gas Co.; E. P. Prater, Arkansas Louisiana Gas Co.; Vars W. Bates, Southern Union Gas Co.; R. B. Fleske, Cities Service Gas Co.; R. F. Nowlin, United Gas Corp.

GENERAL CONTROLS BUYS PERFEX DIV.

An offer by General Controls Co., Glendale, Calif., to purchase the assets of the controls and instrument division of Perfex Corp., Milwaukee, Wis., has been accepted, according to an announcement by General Controls Co.

The transaction involves the purchase of assets of the Perfex division in return for an undisclosed amount of General Controls preferred and common stock. Financial terms of the negotiations were not revealed, except that Perfex Corporation plans to retain its General Controls stock as an investment.

General Controls will operate the newly acquired facility as the Perfex division. The present management will be retained for the time being. In addition to a U.S. plant in Iron Mountain, Mich., General Controls Co. also has obtained the manufacturing facilities of Perfex Controls Ltd., wholly-owned Canadian Perfex subsidiary with a plant in Guelph, Ont.

Perfex Corporation started production of controls in 1936, in its Milwaukee plant. In 1952, the controls and instrument division moved to Iron Mountain, where approximately 500 persons are employed.

INDUSTRIAL HEATING EQUIPMENT BOOMS

Business in the industrial heating equipment field has taken an upswing in the past 2 months, according to Industrial Heating Equipment Association.

"Possibly one of many reasons business has been good is that executives of companies that use industrial heating in their operations were alarmed by the tense international situation and decided to order equipment to modernize their operations before it might become hard to get," said Carl L. Ipsen, executive vice president of the Association.

"Business took an 86% upswing in December of 1954 over a comparable month of 1953 on the basis of orders received. In January 1955, it was 37% better than in January 1954 on the same basis," Mr. Ipsen said.

PORTLAND GAS MAKES APPOINTMENT

Samuel S. Ericsson has been appointed assistant to the president of Portland Gas & Coke Co., succeeding Wesley A. Cook who was appointed a vice president recently.

During the past 6 years, Mr. Ericsson has been employed as assistant manager of the Foreign Commerce Department of the Chamber of Commerce of the United States. He also has served as U. S. Secretary to the Canada-United States Committee, maintained jointly by the United States and Canadian National Chambers of Commerce.

BRYANT BUYS PAULSEN-JOHNSON

Purchase of the principal assets of The Paulsen-Johnson Co. by Bryant Industrial Products Corp., Cleveland, was announced recently.

Paulsen-Johnsen, also a Cleveland firm, manufactured a line of valves and regulators well known in the combustion equipment industry. These products will be manufactured in the Bryant Industrial plant.

Utilities' Sales Efforts Not Equal to Job-to-be-Done

GAS UTILITIES, individually and collectively, are viewed as the sparkplugs that will fire the enthusiasm of the entire industry — producer, pipeliner, appliance and equipment manufacturer, distributor and dealer — to activate the team-potentials that have been advocated by some industry leaders.

William B. Hewson

"I'll bet my bottom dollar," said William B. Hewson, "it will be what we in the gas utility business do that primarily decides the future of gas as leading fuel in the next 20 years."

The utilities, Mr. Hewson said in his recent address before New England Gas Association, are "the catalyst necessary to the gas industry's future."

Industry-wide cooperation was stressed, during his address, as being essential.

Statistical projections of the gas industry's appliance sales during the years ahead were scrutinized by Mr. Hewson with the built-in question: Isn't this a point at which we begin to see clearly the industry's dependence on the local gas utility?

"Forecasts of large unit sales are not the answer," Mr. Hewson emphasized, "unless we place them in the field of relativity with our competitors' sales.'

A check-list of questions was placed before the New England audience by Mr. Hewson, who is vice president, Brooklyn Union Gas Co.

"What about our awareness of conditions in the services we would like to perform in homes and industry? Have we, as an industry examined our status there? I think that we all recognize that we have.

"Who doesn't know what's happening to the gas refrigeration market, for example? Whether we will, or can, do anything about this distressing situation is beside the point — we all know what's happening in terms of the total refrigeration market and we know that it isn't good.

"... in the clothes dryer field, the industry, while gradually improving its position, is still being outsold by its electric competition.

'We know the spottiness of the marketing job the gas industry is doing with the incinerator ... how little we're actually doing with gas air conditioning ... with high-grade adequately-sized water heaters ... with commercial counter cooking equipment."

Mr. Hewson also called the New England association's attention to the little utility accomplishment in "selling the merits of relatively high-cost year-round industrial gas" and noted the adaptability of gas to the new concepts of automation in American industry.

Is volume sold all it should be?

"Most of us are basking in still another comfortable ray of sunshine, which might have the effect of putting some of us in a napping mood.

"Our industry is selling tremendous and ever-growing quantities of gas. Some of this is brought about because of a fantastic customer growth in some part of the country — and the balance is coming because natural gas supplies are being strengthened and this has gotten the house heating sales ball rolling again.

"But, whatever you conclude is causing the gas sales growth, don't you agree with me that it creates an illusion of growth that we just haven't earned in a lot of markets we serve? A continuing study made by the [American Gas Association] committee on economics and issued last fall, predicted that gas sales would increase by 31.5% from 1953 to 1957. I'm sure ... that we'll welcome this increase in direct proportion to how much of it comes true for our own individual companies. But there is still one question that stays unanswered in my mind.

"What per cent of this gain, or of the gain we've had in recent years, is coming in the markets which we are battling to win — or to hold? How much of this sales increase will be gas for air-conditioning, for both domestic and commercial cooking, for drying and incineration, and for process gas sold to industry?

"Again I think the answer lies only in the attitude of the local gas utility."

Hewson, Brooklyn Union, sees companies as 'taking siesta'

Mr. Hewson declared that the gas industry isn't working as hard or as effectively, at selling, as it did in the past. For clarity, he stressed that he was not alluding to the energy, enthusiasm or effort of individuals, but to most gas utility companies and to the industry as a whole.

"I'm going to try to prove it to you only as far as The Brooklyn Union Gas Co. is concerned. Then it's going to be left to you as individuals to make the same examination — with the same yardsticks — in your own bailiwicks. I hope you'll prescribe some of the same medicine for your company that I'm going to prescribe for mine.

"I don't want to give the impression of criticizing Brooklyn Union's operation because I intend to point out that there were

The Brooklyn Union Gas Company

SUMMARY OF OPERATING EXPENSES

EXCLUDING DEPRECIATION, EXTRAORDINARY AMORTIZATONS AND TAXES

	1939	1954	Variation Per Cent
Production	$ 5,082,000	$13,187,000	+159
Distribution	2,982,000	7,472,000	+150
Customers' acct. and collections	2,214,000	4,569,000	+106
Administrative and general	1,821,000	4,471,000	+146
Sales promotion	807,000	1,373,000	+ 70
TOTAL	$12,906,000	$31,072,000	+140

SALES PROMOTION VARIATIONS

1939 COMPARED TO 1954

	Variation Per Cent
Supervision	+110
Demonstration	+ 10
Promotional advertising	+115
Rents and misc. sales expenses	+ 11
Sales activities—including salaries, commissions and merchandising jobbing and contract work	+ 3
TOTAL	+ 70

	1939	1954	Variation Per Cent
Other ordinary operating expenses	$12,099,000	$29,699,000	+145
Gross gas sales revenue	23,300,000	52,600,000	+126
Appliance sales volume	3,900,000	5,700,000	+ 46

good and sufficient reasons for doing what we did. The purpose of this analysis is to see where we *can* and *should* go from here."

Then, Mr. Hewson presented 3 tables that reflected certain expeditures by Brooklyn Union in 1939 and in 1954, with the percentage variation in each category. The tables are reproduced as part of this article.

Promotion has not followed pace

"It is obvious [in 1st table] that sales promotion expenses have gone up at only one half the rate that other expenses have. Unfortunately there are no complete industry statistics available covering the same years, but I strongly suspect that if there were, these same relative results would be found. I also suspect that if . . . you make a comparable examination, the chances are better than even that you will discover the same thing has happened in your own company.

"There are many people in the industry who see nothing wrong with this trend. Some might even reach the conclusion that our promotional work is being operated more efficiently than the rest of our business.

"I am afraid that just isn't so. There are students of gas utilities who would be quick to point out that production costs in companies that used to sell manufactured gas haven't risen at all in direct ratio to the volumes of gas sold. . . . Quite true! But isn't it also true that, if we are going to hold these new levels of volume and grow on this higher base, we had better lift our promotional efforts to this higher plane?

"I'm not suggesting that tomorrow Brooklyn Union, or any other company for that matter, should double its promotional expenditures. What I am saying is that we should start right now the slow process of moving up our promotional effort and our spending to the relative level of the rest of our expenses, because the need for this is so evident when our competitive position is analyzed.

"There are valid reasons for the other cost increases that have taken place, but isn't it almost time to apply the same reasoning to sales promotion expenses? Aren't we in an era of unequalled competition? Aren't we feeling the effects of more competitive advertising and manpower than we could have conceived of 15 years ago? Aren't we at a stage where promotional developments of new gas appliances demand more of us than ever before?

"The 2d table examines more closely what has happened within the items of sales promotion during the same 15 years, and, [in the 3d table] there are thrown in a couple of other comparisons for relativity purposes.

"You will note . . . that against a 70% increase in sales promotion expenses in these 15 years, other ordinary operating expenses were up 148%, gross sales revenues 126%, and dollars of appliances sold up 46%.

". . . there are lots of good reasons why all this had to be. . . . During World War II there was no point in a large promotional budget. . . . After the war, the demand for, first gas appliances, and then later for gas itself, was greater than the supply for almost 3 years. It wasn't until we had gone through the minor agonies of conversion to natural gas in 1952 that our gas supplies were really no longer a source of immediate concern.

"Since then we have been trying to perform a very delicate juggler's trick. This called for a succession of rate reductions to get ourselves in a competitive position, and at the same time called for us to raise our dividends to pay our stockholders something approaching an adequate return. So if we had it to do all over again, I'm sure our best judgment would have dictated almost the same course that we followed."

The long-range view

Long-range planning was urged upon the New England utility executives by Mr. Hewson, at that point. He said that all gas utilities had better define their goals over the next 20 years. Then, he visualized some of the objectives of Brooklyn Union during that period.

"1. We must hold the present 98% saturation of gas cooking at that level.

"2. We expect to acquire all the residential heating business in buildings with 1, 2, or as many as 6 families.

"3. All the water heating business in the same market will be obtained.

"4. On an off-peak basis, we want to get all the rest of the water heating business. Where heavy oil is the winter fuel we want the water heating for the 6 summer months. Where #2 oil is used in buildings with more than 6 families, we want the water heat-load for 8 months and the fringe heating load in Spring and Fall.

"5. We want to hold the commercial cooking load at its present nearly 100% saturation for major appliances, and get back the counter cooking business we've lost.

"6. We want to get all the summer cooling business that can be centrally distributed from one unit.

"7. Undefined as yet, we have some real ambitions in the clothes-drying and incinerating fields."

Mr. Hewson told his audience that he was aware that there would be head-wagging in disbelief because some of his goals might seem, to some, far-fetched.

"That may well be right, but I will guarantee one thing," he asserted. "If we don't set these goals for ourselves and work toward them, they are not going to come to pass."

SGA FINALIZES CONVENTION PROGRAM FOR NEXT MONTH

Once again, New Orleans will become the 3-day capital of the natural gas industry next month, when Southern Gas Association brings about 2,000 members and guests into town for its 47th annual convention. The dates are May 16-18, and headquarters will be in the Roosevelt and Jung hotels.

Speakers of prominence, gathered from every part of the country, will give the delegates pointed reports from the past, candid appraisals of the present and authoritative looks at the future.

Merryle Stanley Rukeyser, lecturer, journalist, economist and author, will discuss "What's Ahead for the USA?"

J. Donald Phillips, president, Hillsdale (Mich.) College, and originator of the "Phillips 66" discussion technique, will demonstrate how his methods react on the most timid member of a discussion group.

Arthur Motley, publisher, Sunday magazine supplement, *Parade*, will share his selling techniques in a talk titled "Use It or Lose It."

F. M. Banks, president, American Gas Association, and president, Southern California Gas Co., also will have sales suggestions in his talk, "Breaking Through the Sales Barrier."

T. T. Arden, president, Gas Appliance Manufacturers Association and executive vice president, Robertshaw-Fulton Controls Co., will address a general session.

W. G. Power, advertising manager, Chevrolet division, General Motors, often called "The Billy Sunday of Selling," will address SGA's accident prevention council in an inimitable power-plus performance.

Duncan Cameron Menzies, president, Servel, Inc., will give the Southern utility group an outline of Servel's plans for 1955.

The programs of the SGA sections — accounting, acident prevention, distribution, employee relations, sales and transmission — will include a wide range of currently-pertinent subjects, to be discussed by experts from within SGA ranks and from more-distant companies.

There will be plenty of SGA entertainment, too. The manufacturers' Friendship Hour will be held aboard the S.S. President, which will cruise New Orleans harbor Tuesday evening while cocktails, a buffet and dance music are being served.

The ladies will be guests of New Orleans Public Service Inc., at a morning coffee, and they'll lunch at Diamond Jim's La Louisiane, famous old French Quarter restaurant.

C. I. Wall of Lubbock, Texas, is president of SGA, and Thad W. Rowden, Jr., of Fayetteville, Ark., is general convention chairman.

Others heading convention committees are C. B. Wilson, New Orleans Public Service Inc., housing; Don W. Jenks, Houston Natural Gas Corp., attendance; J. T. McKay, New Orleans Public Service Inc., registration; L. H. Ernst, Caloric Appliance Corp., manufacturers' Frienship Hour; W. M. Nunn, Sr., New Orleans Public Service Inc., arrangements; John C. Deupree, Oklahoma Natural Gas Co., publicity; Mrs. J. H. Collins, Sr., New Orleans, ladies entertainment.

Banks and Arden Air Wide Range of Problems at New England Association Conference

"This I believe"

F. MARION BANKS, president, American Gas Association, and president, Southern California Gas Co., addressed the assembled New England Gas Association in Boston, last month, with the strong belief that "there is — and must be — a mutual area of agreement larger than at present where most ... differences can be compromised." Mr. Banks emphasized his opinion that "a path of progress can be charted out of this area of agreement that each of us can follow without sacrificing principles or prestige." The selected quotations from his address, which follow, enlarge upon his views of gas industry coordination.

F. Marion Banks

"It is important right now, that major aims and objectives of AGA and those of regional gas associations be properly aligned so that members of each of our organizations, and members who belong to both, can best attain our common objectives.

"... it is my opinion that strong regional activity by regional associations is a most effective means of getting things done, and I can tell you with certainty that the national association seeks only to discover means for working more closely with strong regional associations. ...

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"I would like ... to pass on to you ... some things about our industry which I believe and believe sincerely. ... what I am telling you is ... one man's opinion. But it is an opinion arrived at from some 32 years of association with the industry and over 28 years of active participation in AGA affairs.

"I ... start with the subject of unity.

"I believe it is important that you should be convinced of the great need for a unity ... if our gas industry is to maintain and increase the leadership of gas as the ideal fuel for home and industrial use.

"I believe the gas industry must close ranks and present a solid front against the increasingly savage onslaughts of our competitors. None of us, whether we serve those areas where natural gas has long been a bargain fuel or highly competitive areas at the ends of pipelines ... none of us today can truthfully say: 'I am not faced with real competition.'

"Basic differences in opinion are bound to exist in different parts of the country — in Los Angeles and in Boston, for instance. I am not enough of an optimist to think we can resolve these differences simply by declaring: 'We must unite.'

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"Distributing companies in New England may view the recent Supreme Court decision in the Phillips case somewhat differently than the producers in the Southwest. ... it is just as vital to all parties concerned that the cost of natural gas ... at the ends of the pipelines does not price this precious fuel out of the competitive market, as it is that the further encroachment of Federal authorities into privately managed business must be resisted.

"I believe that realistically-priced natural gas can greatly aid the efforts ... in rebuilding the industrial stature of New England. And as long as ample supplies of

"Go, and Do Likewise"

T. T. ARDEN, president, Gas Appliance Manufacturers Association, and executive vice president, Robershaw-Fulton Controls Co., viewed the gas appliance sales situation as being grave, during his address at the annual meeting of New England Gas Association. Speaking of appliance prices, Mr. Arden asked if pricing to undersell electric appliances is giving "the general public ... the idea that gas may actually be inferior merely because it's much cheaper." Also, he discussed the appliance manufacturers' earnings and presented an unfavorable comparison with utility earnings and with all manufacturing.

T. T. Arden

"I wish there were stronger words available, because I should like nothing better than to convey to you, in as forceful a manner as available to me, the gravity of the gas appliance sales and earnings situation.

"... the thought-leaders of the industry have devoted many a waking hour not only to a realization of the situation but as well toward ways and means for bringing about a substantial change for the better.

"Certainly those acquainted with the facts in the industry simply could not remain complacent, happy and satisfied with what they saw.

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"In an earnest desire to provide the operating utility members ... with genuinely useful tools, the AGA, within its gas industry development program, developed and published one of the most gorgeous, complete and understandable appliance merchandising programs that I have ever seen. ... this plan entitled 'Pattern for Profit.'...

"How many of you embraced this program?

"... I hope the situation is far different in New England than, unhappily, I have found elsewhere in these United States ... in far-too-many instances, this beautiful program has been buried in the files of utility after utility with little more than a passing thought.

"Yet 'Pattern for Profit' is as alive and vibrant as it was 2 years ago. ... It can not do the job for which it was intended if we permit it to lie in our files gathering dust; nor if we afford it only a passing thought.

"... 'Pattern for Profit' is a dealer sales program, designed to provide the basis for sound dealer cooperative programs.

"Some forthright and enterprising individuals ... rolled up their sleeves and proceeded to put it to work and the results have been most gratifying.

"... I am very much of the opinion that this has not been true in the majority of cases.

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"... we find from time to time that a promotion of appliances might be attempted but only provided that the appliance manufacturer comply with a substantial variety of super-requirements, over-and-above those established by the American Gas Association on a broad base and to an extremely elaborate, time-consuming, and expensive approval requirements program.

"... your industry developed the 10 city demonstration program. ... It was felt that if all of the aspects of this elaborate gas

natural gas exist, I do not believe any gas utility company wants to revert to manufactured gas as an energy source, simply on a cost basis.

For this reason the whole natural gas industry, and today that embraces about 90% of the entire industry, must work together as a team. I think John Merriam, president of the Northern Natural Gas Co., expressed this truth very clearly at the AGA convention, when he said, 'It is up to the members of the natural gas team to find a way to keep the price of natural gas attractive to the consumer and to the public, and at the same time to assure an adequate supply of natural gas. Reasonable members of a team can and must find the right answer on a team basis.' Mr. Merriam declared, 'if they do not, the public interest will suffer, and all of the natural gas team most assuredly will suffer with it.'

"It is that type of unity that I urge on the gas industry."

The gas industry has a better presentation to make to the public than it has ever had before, Mr. Banks commented. The industry must tell that story, he emphasized, "with all the force and sincerity that complete unity can inspire."

"I believe we must unite in telling the story of the real modernity of gas appliances and gas services to the consumer. And here is one of the activities where I believe each member, whether individual or company, can benefit from AGA programs and membership.

"The gas industry development program is blazing a trail for all of us to follow.

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"It has seemed to me that some individuals have become so used to having our PAR program . . . that they have forgotten how important it is. I, for one, believe it may well be the single most important activity we carry on.

"Do you realize the PAR plan now is in its second decade of successful existence? And while the formula for support is not easy to fit to everyone's needs, I feel that the formula as revised this year is the best we could expect to be able to develop in view of the many problems which had to be met. At least the plan now provides a much wider basis of selectivity to the subscribing company.

"In 1954 many people talked in a discouraged vein because we did not raise enough money to cover the enlarged PAR budget. But do you realize that in 1954 we raised more money than in any previous year? What is so wrong about that?

"I am convinced this program is entitled to wider support and I believe our industry will follow through.

"This year's goal is $2,360,000 from utilities, with an additional $300,000 for pipeline research. We even hope that some of the pipeline companies will see their way to supporting PAR over and beyond the pipeline research portion of the program.

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"I would be derelict if I failed to pinpoint what AGA is doing in the field of public relations. Not all it might be? Not aimed at particular targets, you may prefer? Perhaps! But it does merit your support.

"This program is designed to help gas utilities at the local level. It is being coordinated with the programs initiated at the national level by the Independent Natural Gas Association, and by GAMA.

"Your help and guidance will make this program more effective. Try it out by letting the Association know about any public relations problems you may have and also of your achievements. Your experience can help other companies.

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"A great future for the gas industry lies ahead of us. But it is a future that can be achieved only through closer unity, through hard work, and through a universal belief that ours is the finest industry operating in the Nation's economic system.

"This I believe."

industry development committee program could assuredly be placed into operation in 10 given cities, across the nation, and tried for a reasonable length of time, that the industry would then have an automatic yardstick available to convince any and all doubters with respect to the efficacy of the program.

"This 10-city effort has now been under way since June of 1954, and I am delighted to report to you a small but substantial taste of success. I am reasonably sure that within these 10 cities, only an incomplete job is being done with respect to the entire industry development program, and within certain areas of the program, substantial work remains. . . . the development of more and better dealer outlets and utility cooperation with those outlets to help them become genuine merchandisers of gas appliances.

"In some areas . . . the existing situation shows not only a woeful lack of gas appliance dealers but, if anything, a genuinely hostile attitude on the part of most possible dealers toward the gas company . . . in some cases this attitude may be well-founded and can be rectified only by a complete overhauling of the appliance merchandising policy in that particular locality.

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". . . certain of the 10 cities fired with enthusiasm have made an honest and sincere attempt to get going on the development program, and they have invited the cooperation of a number of appliance manufacturers but with a strange reaction.

"In one instance, the participation of 21 appliance manufacturers was invited and only 4 showed up, which I will frankly admit to you, shows an appalling lack of understanding on the part of some of our own GAMA members . . . I can only assure you that we are doing our very best to bring about substantial improvement.

The earnings of appliance manufacturers were faced squarely by Mr. Arden, as he continued his Boston address.

"Most utilities consider themselves as regulated industries operating within . . . a very effective top limit upon earnings . . . in the 5½-to-7% . . . bracket. Here is where I should like very much to . . . remind you that in the unregulated gas appliance business, earnings in recent years have not been anywhere near that good.

"In 1953 . . . 5 manufacturers of gas ranges, collectively doing $145-million worth of business . . . at a profit of only 4.3% before taxes. In 1954, this same group . . . did $103,246,000 of business and earned only 2.3% before taxes.

". . . we see the larger and well-managed automobile manufacturers able to operate at better than 16% before taxes, and all manufacturing, the country over, averaging over 9% before taxes. . . .

". . . almost anything that the appliance manufacturers can be expected to do by way of expending extra dollars for promotion, research, development, product improvement . . . has just got to come out of more earnings.

"Somehow or other, you and I may have to devote ourselves to this problem because . . . the utility business must have a live, virile, and successful appliance industry, able and willing to keep pace with whatever growth the industry is to experience.

". . . many of our excellent gas appliances are in every way comparable to remarkably similar electric appliances, but our gas appliances sell for substantially less money at retail.

"A recent analysis of average gas range prices, for example, shows that they retail for $170 . . . average electric ranges bring $255. A similar analysis . . . showed that gas water heaters retailed at $80 . . . electric heaters bring $132.

"Can it be that we are so burdened with inferiority complexes as to believe that we must substantially undersell the electric appliance? Or have we through almost-suicidal practices allowed pricing structures . . . to deteriorate to the point where not only do the manufacturers net almost no return . . . but perhaps the general public gets the idea that gas may actually be inferior merely because it's much cheaper?

". . . . it seems to me to be very much in order to review . . . the desirability of keeping gas appliance prices low. In this sense I am thinking of the many attempts . . . made to elevate the quality of the product only to be met by entirely too many others in the industry with demands to keep the price down.

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"Obviously, it is going to require a substantial amount of generalship and especially salesmanship. . . .

"A tremendously better job in appliance merchandising must be done if the interests of all of us in the industry are to be served.

"If one or 2, or more, of the demonstration cities can do the job through a simple willingness to embrace the industry's development program, is there any reason whatsoever to believe that it cannot also be done by any other city or community?

". . . may I offer you the words which have made up the title . . . Biblical in origin and practical in application: 'Go and Do Likewise'."

Price Indexes: Gas, Other Fuels and Electricity

(1947-1949 = 100.0) Source: Bureau of Labor Statistics, U. S. Department of Labor

	1955	1954											1953	
	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	April	Mar.	Jan.	Dec.	Jan.
GAS														
Space heating	117.3	116.4	115.7	115.5	114.6	114.5	114.4	114.3	114.5	114.1	113.9	113.6	113.6	108.9
Non-space heating	111.1	110.6	109.8	109.7	108.8	108.8	108.9	108.8	108.9	108.8	108.8	108.8	108.8	106.4
Natural														
10 therms	101.0	100.9	100.6	100.5	99.4	99.5	99.9	99.7	100.0	99.9	99.9	100.0	100.0	98.3
25 therms	115.8	114.8	113.9	113.7	112.3	112.2	112.5	112.3	112.6	112.3	112.3	112.2	112.2	108.9
Manufactured														
10 therms	111.2	111.1	109.5	109.5	109.5	109.4	109.2	109.4	109.4	109.4	109.4	109.4	109.5	106.9
25 therms	110.6	110.5	110.3	110.3	110.3	110.2	109.4	109.6	109.5	109.6	109.6	109.6	109.7	107.8
Mixed														
10 therms	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.2
25 therms	100.4	100.4	100.4	100.4	100.4	100.4	100.4	100.4	100.4	100.4	100.4	100.4	100.4	100.0
All types combined														
10 therms	106.4	106.3	105.6	105.6	105.0	105.1	105.2	105.2	105.3	105.2	105.2	105.3	105.4	103.5
25 therms	115.5	114.7	113.9	113.8	112.7	112.6	112.7	112.6	112.8	112.6	112.6	112.5	112.5	109.6
ELECTRICITY														
Composite	105.5	105.5	105.5	105.2	104.9	104.8	104.8	104.5	104.5	104.5	104.5	103.8	103.8	104.4
SOLID FUELS														
Bituminous—All sizes combined	120.4	120.2	119.9	119.4	118.7	117.9	117.4	117.2	117.2	119.5	120.6	120.7	120.6	119.8
Anthracite—All sizes combined	130.9	129.8	129.2	128.5	126.5	126.4	124.7	124.1	123.1	130.2	135.0	135.0	135.0	135.9
PETROLEUM														
Fuel oil No. 2	125.0	124.2	121.2	121.0	118.8	118.5	117.7	117.7	118.1	120.6	122.1	121.9	120.9	116.6

Sales Indexes: Gas and Electricity

To ultimate consumers by Utilities and Pipelines

Seasonally adjusted (1947-1949 = 100.0) Sources: American Gas Association and Edison Electric Institute

	1955		1954											1953	
	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	April	March	Jan.	Dec.	Jan.
Gas	216.9	206.0	198.3	195.7	190.0	171.7	178.8	180.6	180.2	176.2	174.9	183.2	194.8	173.6	172.9
Electricity	184.0	180.1	178.7	175.0	175.9	173.1	175.6	177.7	174.6	168.6	164.8	162.1	161.5	159.1	147.9

Shipments: Residential Appliance

(000 units) Source: Gas Appliance Manufacturers Association

	1955		1954											1953	
	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	April	March	Jan.	Dec.	Jan.
Ranges															
Gas	193.9*	155.1*	147.3*	174.0	197.1	203.9	179.4	134.5	174.3	163.8	172.4	188.2	137.0	134.4	169.2
Electric	—	156.2	97.2	90.7	96.4	113.8	86.8	91.4	98.1	94.5	106.0	131.9	116.4	84.4	124.8
Water heaters															
Gas	218.5*	200.0	166.8	179.1	202.0	205.5	207.1	190.3	206.7	195.6	200.8	187.8	164.4	141.9	189.9
Electric	—	62.4	49.4	57.1	63.7	80.4	66.1	66.6	73.0	69.8	70.0	73.6	53.9	44.3	62.3
Furnaces, gas	46.1*	46.8*	50.3	64.3	79.0	82.0	75.4	53.1	57.3	49.9	43.6	36.6	31.0	33.5	31.1
Boilers, gas	3.6*	3.7	3.9*	7.0	10.8	10.9	8.9	6.0	6.2	6.0	4.3	3.9	2.9	3.1	2.7
Conversion burners	5.7*	5.2	9.2	16.0	32.2	35.9	29.4	19.9	19.7	22.5	14.7	7.4	8.8	8.4	9.7

* Preliminary totals.

Index of Yields: Selected Utilities Stocks

Expressed as percentages

	1955			1954											1953
	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	April	Mar.	Jan.	Jan.
Transmission companies	3.94	4.01	4.25	4.27	4.40	4.40	4.17	4.17	4.25	4.04	4.08	4.15	4.17	4.21	4.04
Transm. and distrib. companies	4.91	4.87	5.00	5.08	4.69	4.70	4.61	4.67	4.88	5.01	5.01	5.11	5.27	5.39	5.02
Manufactured & mixed companies	4.72	4.48	4.57	4.88	4.72	4.38	4.16	4.26	4.36	4.45	4.46	4.67	4.68	4.66	4.87
Class "A" electric companies	4.36	4.07	4.13	4.20	4.37	4.46	4.36	4.31	4.31	4.60	4.64	4.70	4.68	4.92	5.08
Class "B" electric companies	4.60	4.55	4.68	4.72	4.69	4.77	4.74	4.70	4.78	4.83	4.94	4.94	4.93	5.14	5.19

This is a straight arithmetical index of comparative yields obtainable on selected gas and electric utility common stocks. The companies comprising this index were selected by AMERICAN GAS JOURNAL as providing a cross-section of each industry. No effort has been made to weight the average to give effect to changes in capitalization or in dividend rates because yields afforded on issues reflect such changes. The index is designed to show rate of return and not necessarily market movements of stocks comprising it. Index is compiled from: transmission companies, 5; transmission and distribution companies, 5; manufactured and mixed gas companies, 4; class "A" electric companies, 4; class "B" electric companies, 5

Utility Needs for New Funds Hold Prospect of Satisfactory Cost

by John F. Falvey
Financial Editor

CORPORATE OUTLAYS for plant and equipment to date this year have been running about even with a year ago, and for all of 1955 are expected to hew fairly close to the 1954 level, $22½-billion.

But with inventories on the increase, after having shown a drop of $3½-billion last year, and with accounts receivable also on the upturn, a study recently made of the corporate financing picture by Bankers Trust Company indicates that total working capital needs of the country's corporations will increase by $7½-billion in 1955, a development which would be in sharp contrast to $4,600-million, the drop notched last year.

Reflecting these latter developments, corporate new capital requirements this year may be half again greater than in 1954. Commenting on "the investment outlook for 1955," the economics department of Bankers Trust feels that investment demands in 1955 are not likely to be satisfied with the ease and facility witnessed in 1954. Including the demands of the U. S. Treasury, the report forecasts that demands for investment funds are likely to rise to a new record high point this year.

During 1954 the commercial banks imparted considerable support to the investment market by adding some $9-billion to their security and mortgage portfolios. It is doubtful that this same measure of support will be forthcoming from this source in 1955, since bank reserves are not likely to be as freely available. The uptrend in business appears to have been reflected in a less liberal policy on the part of the credit authorities in providing reserves to the banking system.

The present credit policy, in the opinion of Bankers Trust, can scarcely be characterized as one of credit restraint, and monetary authorities will most probably provide sufficient reserves to take care of some increase in the money supply. It it noted, however, that restrictive credit policy is not a prerequisite to tighter commercial bank reserve position. In this connection, recognition must be given to the improved loan outlook and the improvement in business prospects, which may reduce the desire of commercial banks to lengthen their investment portfolios as they did in 1954.

Pressure on interest rates may continue

If business continues to improve, and if the investment situation develops in the manner projected for 1955, the upward pressure upon long-term interest rates is expected to continue.

Painting the picture a bit more favorably, however, Dr. Jules I. Bogen of New York University estimates the approximately $12-billion increase in corporate capital requirements this year should be forthcoming with only a small increase in commercial bank borrowings and with an even smaller amount of bond financing than in 1954.

The explanation, he points out, rests with sharply increasing depreciation accruals, an estimated $2-billion increase in retained earnings, and in the expectation that corporate accounts payable and Federal income tax liabilities will increase moderately against the combined $7-billion total reduction which had been effected in both these items last year.

The sole exception to the expected dwindling need for new funds this year is the public utility industry, which may be successful in recording satisfactory cost of new money requirements, if market conditions do not change drastically from what they are at present.

A possible favorable straw in the wind in this respect would be any concrete development serving to bear out the recently expressed feeling of Administrator Albert M. Cole of Housing and Home Financing Agency that the housing boom may reach its peak and level off during the final half of this year.

If any one factor can be advanced for the recent rise in borrowing costs to corporations, it is the siphoning of institutional funds from the corporate market into the far more lucrative income-producing mortgage field. Any damming up of the latter as an enticement for investment funds could not help but redound to the benefit of the corporate bond market.

Mortgage borrowing still at high level

But only seeing is believing, and corporate money managers will have to await concrete developments along this line before visualizing any savings in interests costs. So far as can be ascertained at the moment, mortgage borrowing still is riding along on a high crest, having attained the terrific level of $3,800-millions in the final quarter of 1954, according to Federal Reserve System. This is $800-millions above the fourth quarter 1954 estimate of mortgage borrowing by Council of Economic Advisers.

Until the present slow and antiquated system of reporting mortgage borrowings is put in up-to-date, streamlined fashion, and made far more current news than now is the case, corporate borrowing officers will have to continue their present groping as they try to obtain the best possible market for their companies' obligations.

Certainly, from the corporate standpoint at least, the economic news is all to the good. According to Commerce Department indices, business activity this year has continued the uptrend which marked the closing months of 1954. It reports, in fact, that the rise in business has broadened beyond the confines of the gains registered late last year. "The increase in business," it reports, "has been based both on the sustained growth of major types of demand which maintained their upward trend through the recent readjustment, and on the improvements in other types of demand which had earlier accounted for the 1954 downturn."

According to statistics just issued by Institute of Life Insurance, the more than 900 life insurance companies in this country purchased $545-million of preferred and common stocks in 1954. This was more than twice the 1953 total, and nearly 3 times the volume of their purchases of such shares in 1952. The net increase in their stockholdings in 1954 is placed at $371-million.

Actually small factor in stock purchasing

Favorable as this trend has been, however, these purchases were only a small fraction of the aggregate turnover in stocks on the country's security markets. In a series of 2-day surveys of transactions on New York Stock Exchange over the past 2 years, it was determined that at no time did life insurance company purchases represent more than 0.8% of the aggregate turnover on that market. The usual ratio was between 0.3% and 0.5%.

At the beginning of this year, life insurance company stockholdings totaled in all $2,700-million. Of this total, almost $1,700-million was represented by preferred shares, while the remaining $1-billion was in common stocks. These stocks represent about 2% of the aggregate value of all shares listed on New York Stock Exchange.

Coming along in rapid strides as a medium of investment in corporate common shares are the trusteed pension funds. Some idea of this new force may be obtained from a recent survey by Bankers Trust, which weighs the supply of investment funds flowing from various sources. This trust company administers some of the largest trust funds in the nation.

"As a rough guess," the bank states, "possibly one-fifth of current additions to pension funds are going into common stocks, perhaps as much as $350-to-$400-million a year. Some of the funds . . . have raised their sights on common stocks and have continued to be consistently large buyers; other funds apparently are loath to go into common stocks heavily at present prices but would hope to increase their purchases in the event of a significant correction in stock prices."

There seems to be rather general agreement, among people who contributed to the Bankers Trust survey, that trusteed pension funds regard their common stock holdings as relatively permanent investments.

This viewpoint is significant for the bearing it has on the short supply of good common stocks, which many market analysts cite as an important reason why stock market prices have climbed so high.

While there is diversity in investment policies, Bankers Trust states, pension funds are generally more stock-minded than are the other major savings funds.

"Theoretically," the bank says, "pension fund liabilities are fixed dollar obligations. but as a practical matter there is a constant pressure to increase the scale of benefit payments. This helps to explain the investment interest in common stocks."

INDEX OF YIELDS:
SELECTED UTILITIES STOCKS
See bottom of facing page.

American Gas Journal FEATURE

How Courts Have Ruled on Appliance Sales Contracts

by Leo T. Parker
Attorney at Law

CERTAIN KINDS OF CONTRACTS are merely voidable; other contracts are void.

It is well-settled that an individual, firm or corporation may legally and without liability cancel any contract, as a result of direct or indirect misrepresentation, coercion, undue influence, duress, threats, or where the contract was made without proper authority, or while one of the contracting parties was mentally deficient, under influence of drugs, or under legal age.

Also, certain kinds of contracts are void on their face, such as those against public policy, prohibited by a valid law, tending to effect immorality, or having an illegal objective.

The legal distinction between void and voidable contracts is that, with respect to void contracts, neither party may compel the other to fulfill the assumed obligations; in voidable contracts one party may at his own pleasure and decision either declare the contract void or he may require the other party to fulfill the obligation.

All contracts based on fraud are void. Sometimes a deceitful statement of a seller is legal fraud, and in other cases this is not so.

In Omar Oil and Gas Co. v. Mackenzie Company, 138 A. 392, the court explained that a very thin legal line divides statements which are deceitful from those which are not fraudulent. Also, this court held that before a seller is liable for contractual fraud the purchaser must prove all these facts: (a) clear representation of quality of merchandise; (b) falsity; (c)materiality; (d) seller's knowledge of its falsity; (e) intent that it should be acted on by purchaser; (f) purchaser's ignorance of falsity; (g) his reliance on its truth; (h) his right to rely thereon; (i) his consequent and proximate injury.

Stating the law in another way, no seller is liable for fraud unless the purchaser proves that (a) seller made representation of an existing fact; (b) representation was false; (c) seller had knowledge of falsity; (d) seller intended that false representation should be acted on by purchaser; (e) purchaser was ignorant of falsity; (f) purchaser relied on truth of representation, with consequent damage.

Failure of the purchaser to prove all these facts will result in the seller not being liable for damages, based on fraud, although the item involved is inefficient in every respect.

Implied guarantee

A purchasing agent of a gas company asked this question: "Under what circumstances is a seller of gas appliances and equipment, who gives no guarantee, liable on an 'implied' guarantee or warranty?"

It is elementary law that a seller may be liable on an implied guarantee if he knows the intended uses to be made by the buyer of the merchandise. This is particularly so if the subject of the sale is not reasonably worth the purchase price, and the seller gave no expressed guarantee. The seller can, however, avoid responsibility on an implied guarantee by proving that he informed the purchaser before the contract was made that he was making the sale "as is," with no guarantee.

Notwithstanding this usual law, modern higher courts consistently hold that sellers are duty-bound to do all things reasonably necessary to prevent or minimize damages likely to be sustained by purchasers. If the seller negligently fails to do so, the purchasers can recover full damages for such neglect, and breach of either an expressed or implied guarantee.

In Mass. 177 S. W. (2d) 372, the higher court held a seller liable on an implied guarantee where testimony showed that the seller had stated to the prospective buyer that the used or trade-in equipment "operates satisfactorily." The equipment would not operate satisfactorily to the purchaser and the court held the seller liable in damages on breach of the guarantee.

Another court held a seller liable on an implied guarantee because he had made statements which lead the purchaser, who had no opportunity to inspect the merchandise, to believe that it would operate satisfactorily. Hanna, 160 Mo. App. 437.

For comparison, see Johnson, 187 Ala. 142. Here the court held that a purchaser must accept and pay for equipment where the testimony showed that (a) the seller had not expressly guaranteed it; (b) the purchaser had not explained to the seller the intended special uses of the equipment and (c) the purchaser did not realize that the equipment was not suited to his purposes until he tested it.

In another case, a purchaser of a used appliance inspected it before he bought it. Later he discovered that it had defects and sued to compel the seller to take it back, and refund the purchase price.

The higher court held that the seller was not liable on an implied guarantee, because the purchaser had tested and inspected the appliance before he purchased it. Lamb, 51 Cal. App. 433.

For comparison, in Lester, 117 Fed. (2d) 780, it was shown that a prospective buyer told a seller that he needed certain equipment "in good running condition." The seller verbally stated that the equipment "is in good first-class shape."

The higher court held that the seller must take back the equipment which had many defects.

And, in White, 9 Tenn. App. 501, the higher court held a seller not liable on an implied guarantee. The testimony proved that he had included. in the written contract of sale, the statement that the equipment was being sold "as is" and subject to no warranty.

For comparison see Leboe, 296 Ill. App. 622, where the testimony showed the facts: A written contract contained a clause providing that all prior verbal agreements were cancelled and that the written contract constituted the sole and complete obligations of the seller.

In this case, the seller was liable on an implied guarantee. The court held that the written contract did not embody the complete contract between the buyer and seller because of the statement referring to verbal promises and guarantees.

This court explained that if the seller intended to avoid responsibilities on verbal guarantees, he should have so stated clearly in the written contract.

Duty of purchaser

A seller very frequently may avoid responsibility for breach of a sale contract by proving that the purchaser violated the terms of the contract. If a seller shall be liable on a guarantee, the purchaser must comply closely with the terms of the contract.

A purchaser, in one case, decided to rescind his contract to purchase certain merchandise because the seller had failed to make delivery on the date specified in the contract. The testimony showed that the purchaser had used the merchandise in his business for a day or so. Hence, the higher court held that he must keep and pay for it. Jeffery, 93 Fed. 408.

In Hughes, 253 Mich. 386, the testimony showed that a seller guaranteed the merchandise involved. A week after accepting delivery, the purchaser discovered that it did not equal the quality specified in the guarantee. However, the purchaser kept the merchandise for 90 additional days, although he complained to the seller that he had been defrauded.

The higher court held that the purchaser could not rescind the contract and that he must pay for the unsatisfactory merchandise.

Advertisements or guarantees

Generally speaking, a gas company is liable on a guarantee based on advertisements. Obviously, the purchaser must prove that he relied on the advertisement before making the contract, otherwise he cannot hold the seller liable. Moreover, a seller is not liable on a guarantee where he merely "puffs" or "brags" on his merchandise.

In one case, it was shown that an advertisement stated that the advertised equipment was "far beyond competitive devices in quality of manufacture."

The court held that this statement is not an absolute guarantee, but only natural "puffing" of a seller. James, 80 Fed. (2d) 1012.

Other courts have held that sellers are not liable on guarantees although products are advertised as "best in world;" or "better than other competitors," or "perfectly satisfactory."

Resale values

Considerable discussion has arisen over this question: When may a purchaser hold a seller liable for false statement of the resale value of equipment, appliances or merchandise?

Generally, a mere statement of a seller that merchandise has a named value is not legal fraud, and the seller is not liable.

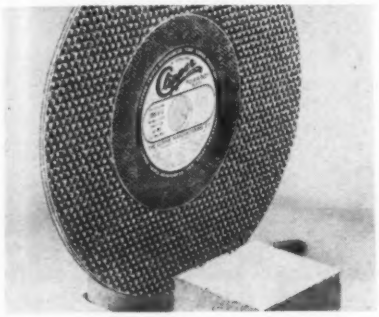
Turn to page 32—COURT RULINGS

Gas Journal FEATURE

NEW Gas Industry EQUIPMENT

Masonry Blades—Clipper

Break-resistant abrasive blades for masonry cutting, recently introduced by this manufacturer are new in design and are claimed to set new standards of safety and economy. The new blades, says the manu-



facturer, make it possible to cut every masonry material, hard, medium and soft, with efficiency of conventional blades and added safety of scientifically-designed reinforcing.

Reinforced to cutting edge with glass fiber webbing, the new blades have extra reinforcing on both sides at the hub, where strain is greatest. Both sides of blade are symetrically covered with raised abrasive "jolkadots," each acting as an extra cutting edge. Additional benefits are cooler, smoother-running blades that cut faster and last longer, to lower cutting costs for reinforced blades.

In standard diameters: 12", 14", and 18", the new blades are available in complete specifications range for cutting masonry material, hard to soft.

Polk-A-Dot abrasive blades. Clipper Manufacturing Co., 2800 Warwick, Kansas City 8, Mo.

Differential Pressure Transm.—Barton

This pneumatic transmitter is described as accurately transmitting flow, liquid level, and/or differential pressure at a high speed of response with low air consumption. Adverse conditions, such as wide ambient tem-

perature variations, rapid fluctuations in flow, mechanical vibration of lines and severe overloads will not impair its accurate operations, the manufacturer states, because of the design feature of the rupture-proof differential measuring unit. Installation and operation is simple, it requires minimum maintenance by relatively unskilled personnel. The transmitter features accessible, rugged but sensitive adjustments; high-capacity pilot valve; self-contained sintered metal strainers, for inlet and outlet of air; direct mechanical indicator that insures continuity of operation on air failure or while servicing the air system.

Model 214 transmitter. Barton Instrument Corp., 1429 S. Eastern Ave., Los Angeles 22.

Large Aluminum Meter—Rockwell

A new aluminum gas meter, believed to have the greatest capacity per pound of any industrial hardcase gas meter in the world, has been introduced by this manufacturer. Intended for commercial and industrial services, the new large capacity No. 4 weighs 176 lbs as compared with 600 lbs for the company's cast iron meter of same capacity and working pressure.

Designed for working pressures to 100 psi, its overall dimensions are 33" x 27" x

19", permitting easy movement through restricted passages. It can accommodate flows and 5,000 cfh at 2" wc pressure loss when of up to 2,250 cfh at ½" wc pressure loss handling 0.60 sp. gr. gas.

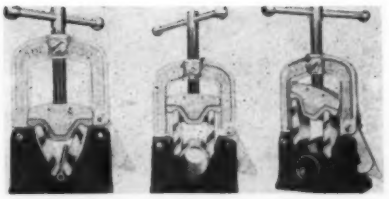
Stainless steel inserts provide corrosion-resistant wearable threads in index plate holes on cover, 4 capscrew holes at ends of body and in both inlet and outlet.

The meter also is equipped with steel feet, ½" high, for insulation. All internal parts of the new aluminum meter are interchangeable with those of the cast iron counterpart.

Aluminum meter No. 4. Meter and Valve Division, Rockwell Manufacturing Co., 400 N. Lexington Ave., Pittsburgh 8.

Jaw-Action Pipe Vise—Toledo

Jaws that grip with rocking wedge action provide a number of advantages that are said to be exclusive with this manufacturer.



The advantages include: firm gripping action without crushing; ability to grip securely pipe from ⅛"-to-2½" and irregular shapes such as valves, tees, ells; jam action that tends to eliminate marking of pipe. The vise has heat treated jaws, and is ruggedly constructed for heavy duty use.

Toledo No. 1 pipe vise. Toledo Pipe Threading Machine Co., Toledo, O.

Multiple-Branch Tee—Tube Turns

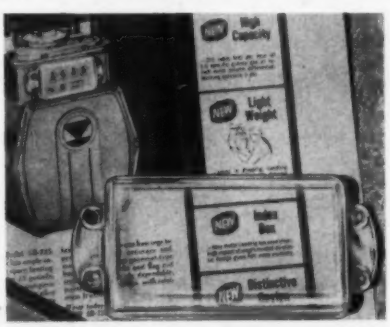
A multiple branch tee with integral extruded outlets has been introduced by this manufacturer. The new tee makes possible sound and economical solutions to many header problems. A recent change in the code for pressure piping, section 8, requires the use of welding tees, such as those pic-

tured here. The new tee conforms to the code area replacement formula. It is especially useful where branch outlets are appreciably smaller than the run pipe. The new product is tailored to individual jobs; size, wall thickness and number and size of outlets are determined by individual service conditions. It is available in all commercial metals and alloys.

Multiple branch tee. Tube Turns, Louisville 1, Ky.

Meter Index Box—American Meter

Clear view of meter indexes on American Meter's new aluminum case meters and sim-



plification of meter readers' work is the objective of the development of a Plexiglas

At annual water heater sales meeting of John Wood Co., 35 salesmen in the Conshohocken, Pa., headquarters. Kneeling, L-to-R: William T. Briggs, vice president and Eastern sales manager, and Robert W. Simpson, vice president and general sales manager; extreme right, Jack Wood, promotion manager.

SUPERIOR
METERS

RESPECTED BY
TWO GENERATIONS
OF METER MEN

★

ALL SIZES
5B TO 75C

★

PARTS—REPAIRS
DIAPHRAGMS

★

OVER 1,000,000
SUPERIOR METERS
ARE OUR BEST SALESMEN

SUPERIOR
METER COMPANY, INC.
167 41st ST., BROOKLYN 32, N.Y.

SPRING SALES PLANS SET BY JOHN WOOD CO.

A complete new Spring sales promotion and advertising program was announced to representatives of John Wood Co. heater and tank division at sales meetings, first in the company headquarters and then in the Chicago district office.

The new 1955 program offers the trade a strong, forceful selling theme, backed by all necessary promotional materials and advertising helps.

"Thanks to the John Wood-developed off-center internal flue construction, automatic gas water heating can be sold for the first time on a provable economy basis," said William T. Briggs, vice president and Eastern sales manager. He stated that the proved economy of the Wood-developed construction reduces consumers' gas bills by as much as one month's bill in every 12.

Keynote of the conference was set by R. W. Simpson, vice president and general sales manager; and by Mr. Briggs.

Materials shown at the meetings and now available to the trade included displays, mats, sales-fact books and point-of-sale leaflets; a display of consumer and trade advertising was made by John Wood's advertising department and agency, Morey, Humm & Johnstone, Inc.

The program is the first of 3 seasonal promotions by John Wood Company during the current year, said George K. Lentz, advertising manager.

WOMBACKER IN CONTROLLERS INSTITUTE

Bayard F. Wombacker, assistant treasurer, Southern Union Gas Co., has been elected to membership in Controllers Institute of America.

GAS EQUIPMENT

Continued from page 25

index box. The box is not affected by ordinary exposure to light or to the elements, making it equally suitable for exterior and interior meter setting. The box in molded in one piece of the impact- and shock-resistant plastic. Mounting holes, integral with the box, are fitted for the aluminumcase meter, announced recently by the manufacturer. The new index box is standard on 5B-225 aluminumcase meters and is furnished when requested on 3B, 5B and 10B iron-case meters.

Plastic index box. American Meter Co.

RAWLINS IS LINDBERG'S TEXAS MGR.

R. K. Rawlins, who has been on the Chicago sales staff of Lindberg Engineering Co., has been appointed district manager with offices in Dallas and will direct sales activities in the Texas-Louisiana area.

HUDSON W. REED

Hudson W. Reed, former general manager, Philadelphia Gas Works, died March 12 at the age of 75. Prior to retirement on January 1, 1954, Mr. Reed had been vice president and also a director of The United Gas Improvement Co. He had been associated with UGI since 1931 and with PGW since 1936, when he became executive vice president.

In 1942, Mr. Reed became president of PGW and remained in that capacity until 1953 when, through a change in PGW's corporate structure, he became General manager. He remained in this position until the time of his retirement.

Surviving Mr. Reed are his wife, Grace, and 2 sons, Hudson W., Jr., and Randall W.

Natural Gas Reserves—1954—Had Smallest Increase Since 1946

Production during year substantially less than increase in reserves

PROVED RECOVERABLE RESERVES of natural gas on December 31, 1954 were estimated at a new high of 211.7 trillion cf. That includes an increase of 263 billion cf over the reserves of 211.4 trillion cf estimated a year ago.

In a joint report of the committee on reserves, American Gas Association, and American Petroleum Institute, the extensions and revisions, and new discoveries of natural gas in 1954 were shown to again exceed production, which had a new high of 9.4 trillion cf in 1954. Production of natural gas was about 2 billion cf greater in 1954 than in 1953.

New discoveries of natural gas reserves in 1954 totaled 5.0 trillion cf compared with 7.1 trillion cf in 1953. Extensions and revisions of previous estimates during 1954 added 4.6 trillion cf to the proved recoverable reserves; 13.4 trillion cf a year earlier. Approximately 90.9 billion cf of natural gas were added to estimated reserves in underground storage during 1954.

NATURAL GAS RESERVES AND PRODUCTION

In trillion cubic feet

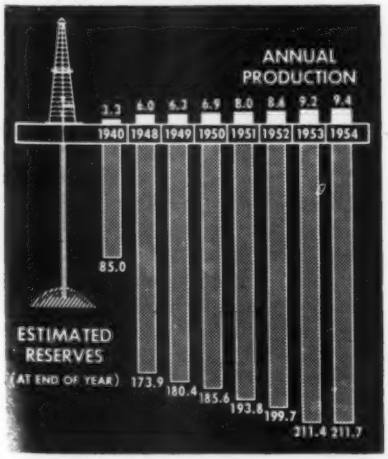


Chart: American Gas Association

NATURAL GAS RESERVES

BILLIONS OF CUBIC FEET

Total proved reserves, December 31, 1953		211,447.1
Extensions and revisions of previous estimate, 1954	4,632.3	
New reserves discovered, 1954	4,966.9	
Net change in "stored gas", 1954	90.9	
Total proved reserves added and net changes in "stored gas", 1954		9,690.1
Total proved reserves, December 31, 1953, and 1954 additions		211,137.2
Deduct production, 1954		9,426.5
Total proved reserves, December 31, 1954		211,710.7

NATURAL GAS LIQUIDS RESERVES

MILLIONS OF BARRELS, 42 U.S. GALLONS

Total proved reserves, December 31, 1953		5,437.9
Extensions and revisions of previous estimate, 1954	20.8	
New reserves discovered, 1954	86.5	
Total proved reserves added, 1954		107.3
Total proved reserves, December 31, 1953, and proved reserves added, 1954		5,545.3
Deduct production, 1954		300.8
Total proved reserves, December 31, 1954		5,244.4

NATURAL GAS RESERVES — ANNUAL ESTIMATES: 1945-1954

BILLIONS OF CUBIC FEET — 14.65 PSIA, 60F

Year	Extensions and Revisions	Discoveries: New Fields, New Pools	Net Storage Change	Net Production	Proved Reserves Year End	Increase over Previous Year
1945	—	—	—	—	147,789.4	—
1946	*	*	*	4,942.6	160,575.9	12,786.5
1947	7,570.6	3,410.2	*	5,629.8	165,926.9	5,351.0
1948	9,769.5	4,129.1	51.5	6,007.6	173,869.3	7,942.4
1949	8,061.4	4,612.9	82.7	6,245.0	180,381.3	6,512.0
1950	9,172.4	2,877.3	54.3	6,892.7	185,592.7	5,211.3
1951	13,013.6	3,039.4	132.7	7,966.9	193,811.5	8,218.8
1952	8,934.5	5,411.0	198.8	8,639.6	199,716.2	5,904.7
1953	13,371.3	7,081.7	516.4†	9,238.5	211,447.1	11,730.9
1954	4,632.3	4,966.9	90.9	9,426.5	211,710.7	263.6

* Not estimated.

† All native gas in storage reservoirs formerly classified as a natural gas reserve is included in this figure.

AGA COMMITTEE ON NATURAL GAS RESERVES

N. C. McGowen (Chairman), United Gas Corp.
R. M. Bauer, Southern California Gas Co.
Wm. F. Burke, Lone Star Gas Co.
M. M. Fidlar, Mountain Fuel Supply Co.
R. O. Garrett, Arkansas Louisiana Gas Co.
B. B. Gibbs, Union Producing Co.
C. C. Hoffman, Cities Service Gas Co.
F. S. Lott, Petroleum Administration for Defense, Department of the Interior.
E. D. Presler, Humble Oil and Refining Co.
E. E. Roth, Columbia Gas System Service Corp.
J. T. Scopes, Union Producing Co.
C. E. Turner, Phillips Petroleum Co.
Warall J. N. Whipple, Southern Natural Gas Co.
O. E. Zwansig (Secretary), AGA.

The AGA committee estimated that proved recoverable reserves of natural gas liquids had decreased slightly at the year-end to a total of 5.2 billion bbl. A high point in liquids reserves, 5.4 billion bbl, was estimated at the close of 1953. Production of natural gas liquids during 1954 totaled 301 million bbl, compared with 303 million bbl produced in 1953.

Overall view of the 2000-hp engine-driven compressor unit, showing control panel at left foreground

just one switch . . .

TO START AND LOAD MAINLINE COMPRESSORS

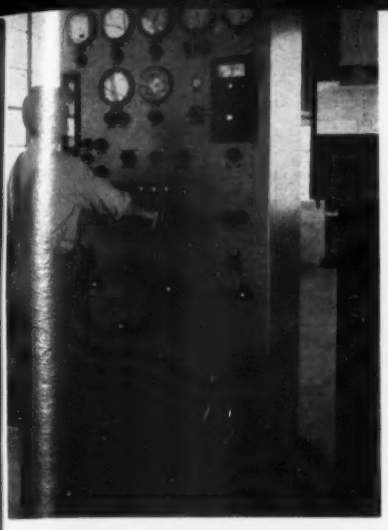
. . . new single-switch control system gives promise of operating economies for reciprocating compressor stations

E. N. Sampson

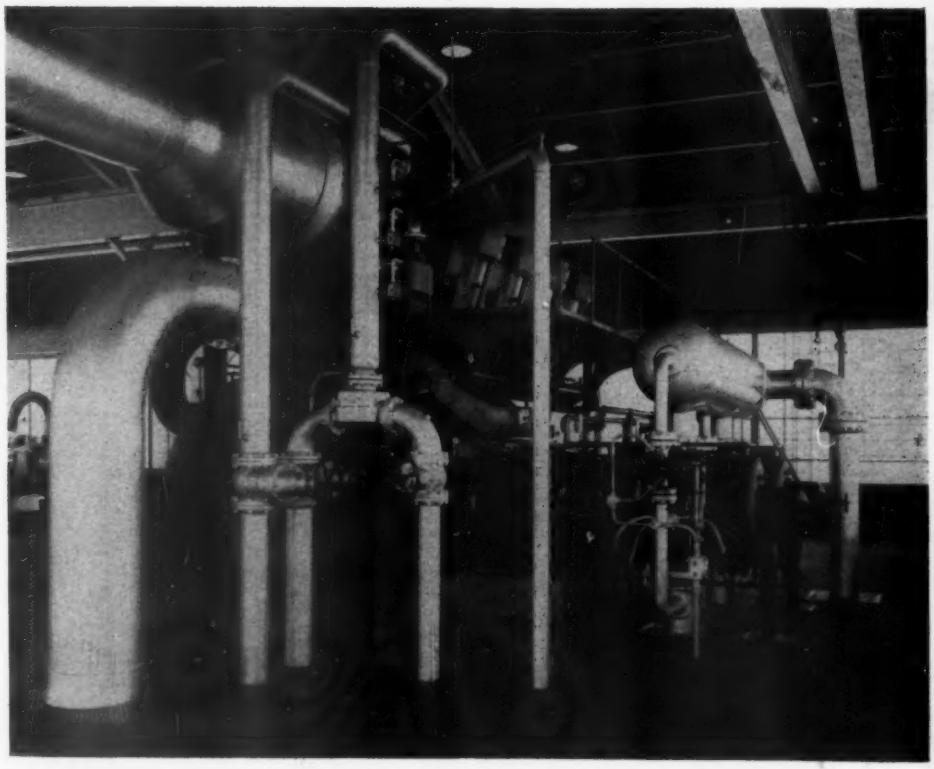
SINGLE-switch control automation for mainline reciprocating compressor stations has become an accomplished fact, an achievement reached by joint efforts of a major gas pipe line company and a compressor builder. A 2000-hp compressor now operating at Northern Natural Gas Company's mainline station, Mullinville, Kansas, is believed to be the first large reciprocating mainline compressor of its kind operated entirely by energizing a single-switch control. The achievement forecasts the time when mainline compressor stations will be equipped to operate entirely by remote control from a central source of micro-wave or by direct line.

Under development for some time through joint efforts of Northern Natural and the Cooper-Bessemer Corporation, a unique automatic control now programs all the functions of starting the engine prime mover and putting the compressor on the mainline, according to technicians from Northern Natural and Cooper-Bessemer who headed the control development program.

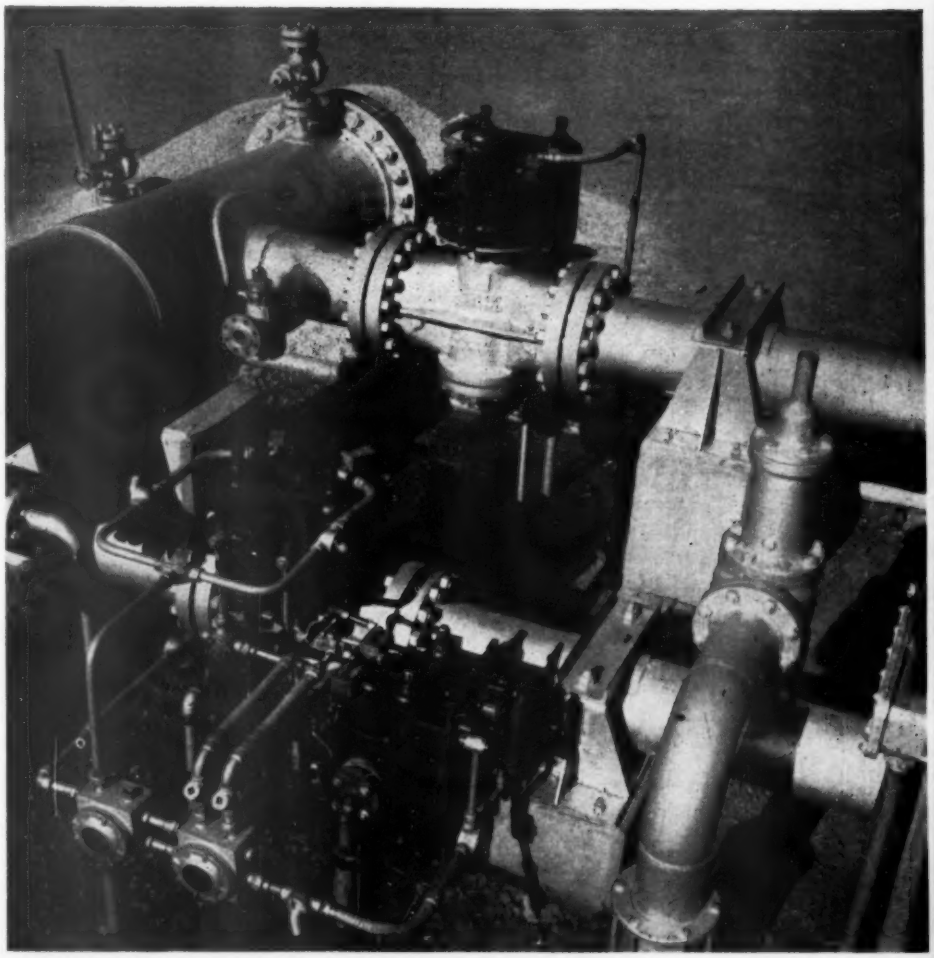
The new development in control design now combines the economies of



Operator at control panel designed for automatic single-switch operation



Forward end of compressor unit. At right is by-pass valve installation, which has valve operator



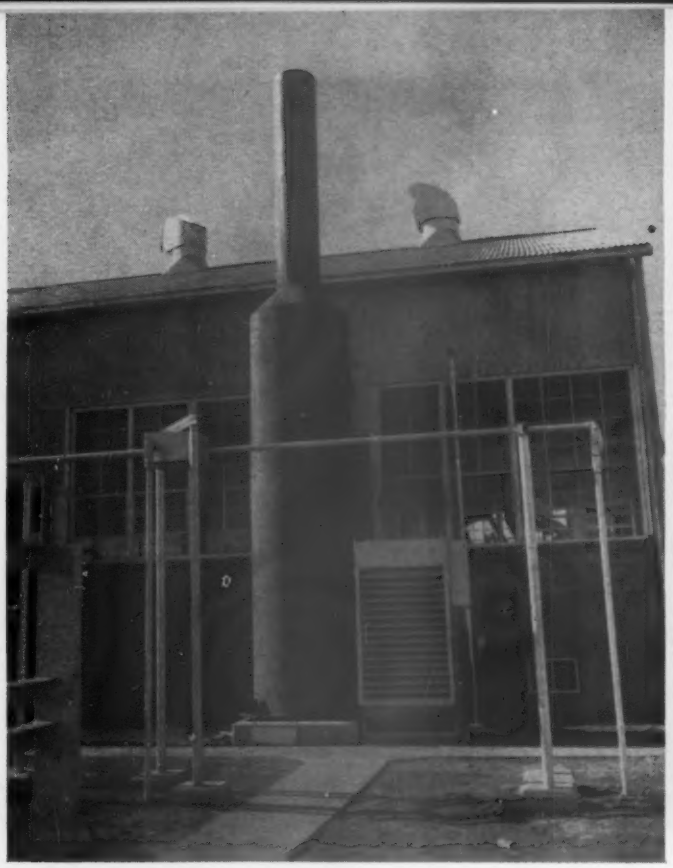
Valve operators are used on manifold blowdown, discharge, and suction valves. The relief valve is consolidated. All valves are plug type

reciprocating compressor machinery with the advantages of complete automatic operation. Marked savings in operating costs will assist reappraisal of pipe line programs for selecting compressor equipment for new stations and expanding existing capacity.

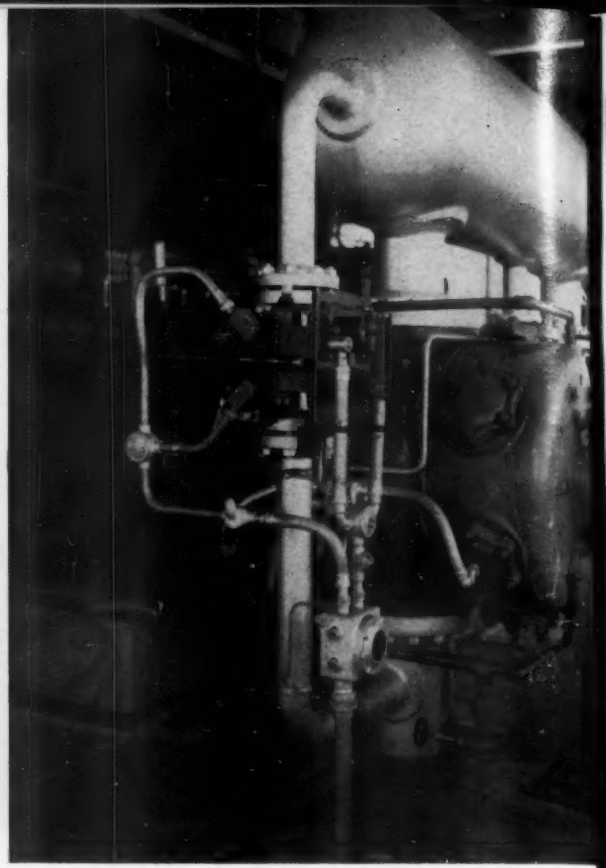
These operating benefits are attained with simpler circuits and fewer steps in sequence. The net result is easier procedure for putting on and taking compressors off the line. The achievement couples the fuel economies of reciprocating machinery with operating advantages of automatic control for cross-country transmission service.

Almost daily improvements in automation of compressors are being perfected by engine and compressor builders. One of the more recent to be reported is on the Gulf Interstate line where semi-automatic control of reciprocating engine driven compresors has proved highly satisfactory. The Gulf Interstate in fact is recognized for having one of the lowest operating costs for its type of transmission service.

On the Gulf Interstate, automatic starting of the engine and cutting in the compressor into the line are hand-



Compressor exhaust and air intake



Closeup of valve operator on by-pass between suction and discharge surge tanks

led as two separate functions. Northern Natural's Mullinville installation advances the automation one step by combining both starting and loading functions into one continuous control sequence.

The inherent operating efficiencies of reciprocating engines are the basic reasons for the savings being realized in mainline station operating costs. Fuel cost is said to be 75 per cent of turbine-driven compressors. Simpler operation and maintenance effect further reductions in operating costs.

Panel Description

The automatic control panel that programs the sequence of operations to start and load the engine has four basic control circuits. These are:

The engine starting circuit
Valve positioning circuit
Alarm circuit, and
Shut down circuit.

The control panel can be set for "automatic" or "manual" operation.

Automatic Operation

On "automatic," the single-switch actuates a sequence of controls, each timed and interlocked to prevent continuance of the cycle program in event of malfunctioning of any phase.

As the starting switch is turned:

Auxiliary pumps are started.

Engine jacket water pressure and lube oil cooling water pressure build up.

When the water pressure reaches a predetermined value, the unit pressurizing valve opens, purging compressor unit piping through the blowdown valve. The blowdown valve closes after a preset time.

The discharge valve opens as the pressurizing valve closes. When the discharge valve is fully opened, starting air is applied to the engine.

Purging time of 8 seconds is allowed in rolling engine on air before ignition is switched on. Once ignition is established, the engine fuel gas control solenoid opens. At this point the fuel gas valve opens, the engine fires and speed increases to a preset valve under governor control. The starting air is then turned off.

After running at this speed for a set time, the line suction valve starts to open, the by-pass valve begins to close. Engine speed is then regulated to 240 rpm and the engine is fully loaded.

Starting the engine and putting the compressor on the line takes between 3 to 4 minutes.

To shut down the compressor, the control panel switch is turned to *"off"* position. The control pressure solenoid closes to shut off the fuel to the engine permitting the engine to roll to a stop. As engine scavenging pressure drops, the line suction valve closes, the discharge valve closes, the by-pass valve opens and the blowdown valve opens. The ignition is cut off by a drop in scavenging air pressure. Water pumps stop at this point.

Remote Manual Control

Provisions for remote manual control of line valves are provided by positioning the control valve switch from

The Author

Edgar N. Sampson is an electrical engineer with the Cooper-Bessemer Corporation, Mount Vernon, Ohio. A graduate of Ohio State University with a degree in electrical engineering, he was employed as supervisor of electrical maintenance and construction with a foundry prior to assuming his present position in 1953. He is a member of Kiwanis and the National Society of Professional Engineers.

Valve operator on suction valve

Jacket water cooling tower equipment

"automatic" to "manual." The line valves are then positioned by individual manual control switches from the panel itself.

When starting the engine on "manual" operation, the master switch is turned to "start" and released to "run," to initiate the auxiliaries. Discharge and blowdown valves are positioned by individual switches. Only when the discharge and blowdown valves are correctly positioned does the engine roll on air through its purge time and come into running condition. The loading of the compressor on the line is done by individual switches on the panel.

To remove the compressor from the line the master switch is turned to *"stop"* position. This shuts down the engine. Line valves are positioned by individual switches. The blowdown valve is interlocked so it will not open until the discharge valve is completely closed, which is also true in automatic operation.

On "manual" or "automatic" operation, individual valve control switches have pilot lights for indicating line valve positions. When line valves are traveling between open and closed positions both pilot lights are on. During "automatic" operation, pilot lights provide visual check on engine start procedures and line valve position.

Pilot lights for auxiliaries "on," ignition "on" and gas "on" are mounted above the master switch. Alarm and shut down pilot lights are mounted directly below respective gages.

Gages and equipment provided on the control panel indicate starting air and control air pressure, with control air low-pressure alarm; jacket water pressure, with low pressure alarm; lube oil temperature, with high temperature alarm; lube oil pressure, with low pressure alarm, and low pressure shut down; fuel gas pressure; and high temperature shut down.

A tachometer for engine speed has an over speed shut down pilot light. The exhaust temperature pyrometer is provided with temperature alarm.

Pilot lights are provided for high discharge gas pressure alarm and shut down. An additional pilot light reports a broken compressor discharge valve, and a switch which will detect the exact valve. A 3-button control station with pilot lights for the radiator fans is panel-mounted on the same control board.

Air starting of the engine is accomplished through an interlocking circuit, of the line valves and pressure control switches of auxiliaries, to a pilot solenoid. Engine ignition is controlled by scavenging air pressure switch that actuates a purge time relay and then the ignition relay. The gas pilot solenoid is operated through the ignition relay.

Scavenging air pressure of the engine shuts off the starting air and interlocks and triggers the line valve positioning circuits.

Control panel alarms provide both visual and audible indication. The horn is silenced by actuating a push button on the panel. Visual alarm remains in effect until the trouble is corrected.

Shut down circuits cover the stopping of the engine and proper functioning of the line valves to "down" position in event of low lube oil pressure, high jacket water temperature, engine overspeed, or high discharge pressure.

The circuits give visual and audible indication for any particular malfunctioning that causes the shut down. The visual shut down indication remains "on" until the master switch is turned to the *"stop"* position. Circuits are made to prevent restarting the engine without first turning the master switch to *"stop"* position.

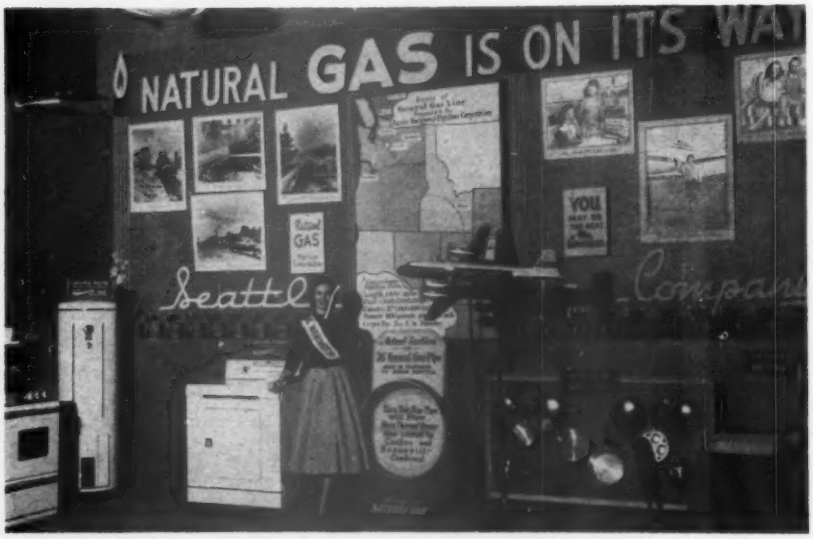
A by-pass, or unit pressuring valve, is provided around the main suction valve to purge and pressure the unit before starting. The blowdown valve closing circuit is interlocked through the control of the unit pressuring valve.

The discharge valve opening is interlocked through closing of the blowdown valve and has a time delay for pressuring the compressor unit.

The unit pressuring valve, bypassing the suction valve, is closed through an interlock with the discharge valve opening circuit. This means that the engine must start with the blowdown valve and the suction valve closed, the bypass valve and discharge valve open.

The reciprocating engine-driven compressor at the Mullinville station is a 2000-hp Type GMWA Cooper-Bessemer. Controls were engineered by C-B built by Kirkhof Electric, Grand Rapids, Michigan. The station addition was constructed by Foor Engineering Company, Oklahoma City.

NATURAL GAS AND MRS. AMERICA PLUGGED BY SEATTLE COMPANY IN HOME SHOW



SEATTLE GAS COMPANY'S 1955 Home Show booth has, as hostess, Mrs. Washington, more-properly known as Mrs. Robert H. Tate, the state-winner in last year's Mrs. America contest.

The display featured the projected coming of natural gas to the Northwest, together with prizes for the next Mrs. Washington. Among the prizes (L-to-R): Wedgewood deluxe gas range, Permaglas deluxe automatic gas water heater, Rheem-Wedgewood gas dryer.

PUBLIC RELATIONS GRADUATES TO GET BYOIR WORK AWARDS

Carl Byoir & Associates, public relations counsel for interests in the gas appliance industry, is inaugurating an annual award of a year's paid internship to 3 outstanding public relations graduates of the Nation's universities.

Gerry Swinehart

Gerry Swinehart, president, said the program is being launched as part of the observance of the firm's 25th anniversary. He added that, "like any sound public relations actvity, it aims at specific objectives."

The goals, Mr. Swinehart said, are: "To further the study of public relations as a profession . . . provide practical experience for outstanding students who have chosen public relations as a career . . . to encourage colleges and universities which recognize the role formal education can play in producing public relations men of the caliber required by American industry in today's complex economic system."

The selected men and women will follow a carefully-organized program designed to train them in the policies, problems and techniques of stockholder, labor, community, trade, governmental and consumer relations of Byoir's 23 varied accounts. They also will receive training in specialized media departments, covering newspapers, magazines, women's interests, pictures and radio-television.

The work-award will carry with it at least a year's salaried employment by Carl Byoir. Successful trainees then will be given permanent employment or helped to obtain public relations positions elsewhere.

K. R. KNAPP RETIRES

Kenneth R. Knapp retired from the AGA Laboratories after 44 years of outstanding service to the gas industry on April 30, 1955. He is nationally known for his contributions to the development of the American Standard Installation of Gas Piping and Gas Appliances in Buildings, Z21.30, having served on the committee since its inception in 1925. Prior to this he actively participated in the preparation of safety requirements for gas appliances and accessories.

Mr. Knapp joined the United Gas Improvement Company, Philadelphia, as a cadet engineer following graduation in 1911 from the University of Pennsylvania. He was connected with the testing and utilization department for 12 years. For the next six years he was engaged in general distribution work for the Philadelphia Gas Works Company. In 1929 he joined the staff of the recently established AGA Laboratories at Cleveland, Ohio, to take charge of a newly organized program of pipe joint research. In 1931 he was appointed chief engineer of the laboratories.

COURT RULINGS

Continued from page 24

In the earliest case on record, the higher court held that "it is folly on the part of the buyer to give credit to the assertion of the seller as to how much the merchandise can be resold for'." Harvey, Yelv. 21, 80 Eng. Reprint 15.

A higher court held a seller guilty of fraud where the testimony showed that he made a definite statement that the purchaser could resell the merchandise for a stated price. In this case the seller did not merely express his opinion of the resale value of the equipment, but made a definite statement of guarantee. Stoll, 56 Atl. 895.

For comparison, in Styler, 107 Or. 48, the higher court held a seller not guilty of fraud where he based the resale value of merchandise on what other dealers believed it to be worth. This court said the purchaser could have avoided litigation and verified the seller's statement by talking with other dealers.

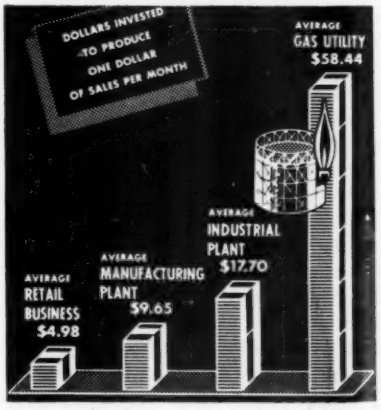
WORTHINGTON SETS UP NEW DIVISION

Aloysius M. Tullo, works manager, Worthington Corporation, Harrison, N. J., has been appointed general manager of a newly established division to be known as the Harrison division.

Mr. Tullo will be responsible for Worthington's Harrison division operations.

Clarence K. Hood, a Worthington vice president, will be division sales manager; George F. Habach will be executive engineer; Max A. Heyman, Harrison works manager; Thomas F. Quinlan, division comptroller; and Charles Schwalje, foundry manager.

INVESTMENT IN GAS UTILITY TOPS MOST OTHER INDUSTRY


DOLLARS INVESTED TO PRODUCE ONE DOLLAR OF SALES PER MONTH
AVERAGE GAS UTILITY $58.44
AVERAGE INDUSTRIAL PLANT $17.70
AVERAGE MANUFACTURING PLANT $9.65
AVERAGE RETAIL BUSINESS $4.98

Source: American Gas Association

The average gas company needs a larger investment, per dollar of sales, than companies in most other industries. That average gas company has about $60 invested permanently in facilities that are required to deliver the volume of gas that would be billed at $1 per month. In terms of employees, the permanent investment of the average gas company amounts to $70,000 each.

Public Information Expanded By AGA with New 6-Point Program

AMERICAN GAS ASSOCIATION general public information planning committee during its recent consideration of the 1955 program. (L-to-R): W. M. Jacobs, vice president, Southern California Gas Co.; John J. Quinn, vice president, Boston Consolidated Gas Co.; Otto E. Zwanzig and James M. Beall, AGA; Remick McDowell (chairman), vice president, public relations, The Peoples Gas Light & Coke Co.; H. Leigh Whitelaw, managing director, Gas Appliance Manufacturers Association; Chester L. May, vice president, Lone Star Gas Co.; Edward M. Hahn, president Kokomo Gas & Fuel Co.; Harold E. Eckes, director, public relations, The East Ohio Gas Co.; T. H. Evans, vice president, sales, Equitable Gas Co.; S. D. Whiteman, president, Kansas-Nebraska Natural Gas Co., Inc.; Sheldon Coleman, president, The Coleman Co., Inc. (representing T. T. Arden), president, GAMA.

AMERICAN GAS ASSOCIATION has set up a new 6-point public information program that includes expanded activities and provisions for coordination with the programs of other gas industry associations.

More than 8-million meters are represented by the 68 companies that are reported as directly supporting the AGA public information activities. A 1955 highlight will be a series of regional workshops on public relations matters.

A major step is being taken by AGA toward a long-range industry wide program, commented Remick McDowell, chairman, general public information planning committee, and vice president, public relations, The Peoples Gas Light & Coke Co.

The 1955 program was designed to "create greater local and national understanding of the gas industry," according to Harold E. Eckes, chairman, public information projects committee, and director, public relations, The East Ohio Gas Co. Also, it aims "to identify gas industry interests with the American competitive private enterprise system, and to establish wider recognition of the indispensable role of modern gas service."

The 6 broad categories of concentration for the AGA information program are:

1. Develop greater awareness among employees, stockholders and customers of their vital stake in the private enterprise system.
2. Stimulate greater public appreciation of gas.
3. Inform employees on gas industry fundamentals and stimulate public relations action.
4. Create better public understanding of the industry's economic and financial needs.
5. Encourage investment of funds in gas industry securities.
6. Acquaint school students with the modern role of gas and gas appliances.

These objectives will be met through a broad variety of activities including institutional advertising, how-to-do-it booklets, exchange of ideas and company practices, news releases, feature articles and personal contacts.

Special efforts will be made to coordinate AGA activities with the information programs of Independent Natural Gas Association of America, Gas Appliance Manufacturers Association, and National Council for LP-Gas Promotion.

PG&E SETS 3-MILLIONTH METER

Pacific Gas and Electric Co. connected the 3-millionth customer meter to its lines recently.

The distinction fell to Axel Andersen, a building maintenance engineer, and his family, as they moved into their new home in Daly City.

For PG&E it was a milestone of growth with California that was marked by special ceremony. A group of company officials, including Norman R. Sutherland, vice president and general manager, and Harry A. Lee, San Francisco division manager, visited the Andersens for a ceremonial installation of gas and electric services in their new home.

The surprised Mrs. Andersen was presented an orchid corsage and a gleaming new dish-washer as tangible evidence of the importance attached by the company to the event. Mr. Sutherland personally set the electric meter while Mr. Lee set the gas meter. A copper commemorative plaque was placed alongside the meters.

From the incorporation of PG&E's earliest predecessor, the San Francisco Gas Co., in Gold Rush days of 1852, it took 76 years, until 1928, for the company to install its one-millionth customer meter. Nineteen years elapsed before the 2d-millionth was set in 1947.

1897 1955

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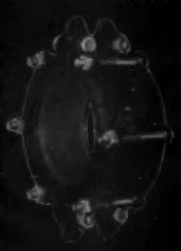

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Most of you can tell at a glance what's wrong with this installation. Yet how many times have **insufficient** vent connector rise . . . improper combined vents . . . and **inadequate** single-wall pipe been the rule rather than the exception. And the property damage, unhealthy conditions and costly vent repairs that often result, **reflect unfavorably on the whole gas industry.**

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Spotlighting such trouble zones is a current Metalbestos promotion project — part of a continuing campaign to rectify vent installation habits harmful to the gas heating business. It hammers home the demonstrated fact, based on extensive research by William Wallace Company and on generally accepted principles, that **double-wall insulated gas vent pipe is absolutely basic to proper venting procedure.**

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Free copies of informative literature for use by dealers, contractors, architects, builders and home owners are available on request.

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POLYVINYL

Continued from page 15

Polyvinyl chloride tape ages very well in sunlight. It is not recommended for piping that will be exposed to temperatures higher than 180F.

Most ordinary paints will adhere reasonably well to polyvinyl chloride tape, in connection with color coding. However, a preferable method is to use a colored pressure-sensitive tape, applied at intervals.

Polyvinyl chloride tape is self-extinguishing. The adhesive is not completely noninflammable. However, when the tape is applied to pipe, the polyvinyl film exposed will not support combustion.

Effects of oil on tape

The problem of oil and other hydrocarbons was mentioned earlier. Polyvinyl chloride tapes which have been wrapped over steel pipe in saturated ground will show an excellent insulation resistance after periods of accelerated tests. On the other hand, results are poor if the pipes are submerged in an actual bath of oil. This is due to the fact that sufficient oil can attack the adhesive. Unlike water, the oil will gradually wick into the adhesive, destroying its properties. Many pipeline companies and refineries have tested the tape thoroughly in actual applications, and use it on repair jobs with excellent results. However, specifications call for a careful cleaning of the pipe; all oil must be removed from the surface before tape is applied.

While quality is the chief concern of any corrosion engineer, it is obvious that economics of the situation also enter into any decision to use a product. Few will quarrel with the idea that the most economical method of protecting a long pipeline is over-the-ditch applications of hot coatings. At the same time, that method of coating ceases to become economical when the size of the job shrinks to a certain point. An engineer, faced with the problem of laying 5 or 10 miles of 8" line through a heavily-populated area could hardly consider over-the-ditch coating.

If the pipe for this job were stopped at a coating mill, the total coating cost would be between $40 and $50 per 100', depending on specifications and joint coating costs. Polyvinyl chloride tape would not be economically feasible on this job. However, as the diameter of the pipe or length of line decreases, the costs of mill-applied hot coatings and tape converge. Jobs which call for less than a carload of pipe are economically taped because of freight and handling charges involved in mill coatings. Polyvinyl chloride tape is also the lowest cost quality coating when bare pipe is buried and spot-coating techniques are used in areas of low soil-resistivity or high chemical corrosion.

Some gas utilities have found that they can use polyvinyl chloride tape economically on service pipe by utilizing labor during rainy days to wrap the pipe.

It is in conjunction with hot-applied coated coal tar on pipe that polyvinyl tape does the best job at the lowest final cost. A considerable volume of polyvinyl chloride tape is used to protect the welded joints and fittings on pipe which has been protected with coal tar enamel. This application is simple and requires no trained crew. In fact, no equipment, no special tools, and the part-time effort of one man is all that is required to protect the welded joints on a mill-wrapped pipeline. The big saving is in labor. The big plus to the corrosion engineer is maximum protection.

WEST VIRGINIA MEASUREMENT COURSE SET FOR AUGUST

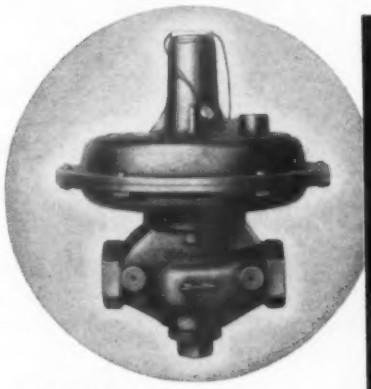
Initial plans have been completed for the 15th annual Appalachian gas measurement short course, August 29-31, at West Virginia University, Morgantown. Attendance is expected to exceed 700, according to Earl A. Mowrey, instrument division representative, Rockwell Manufacturing Co., and 1955 short course publicity chairman.

Subjects to be covered in the 3-day course include fundamentals of gas measurement and special sessions on domestic meters, orifice meters, large capacity meters, automatic control instruments, planning and design installations, pressure regulators and other related equipment. There will be moderated forums on specific phases of measurement and control.

Approximately 100 industrial and technical experts will conduct the sessions.

Steady

REYNOLDS LOW PRESSURE REGULATORS



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VAN DOREN BROTHERS of Richmond, Virginia recently backfilled and compacted approximately two miles of trench, 2 feet wide and 4 feet deep, for a 6-inch gas line with just one man and one machine, a Cleveland "80-W" backfiller.

Before the Van Dorens purchased their "80-W" they used 7 men, a rubber-tired dozer, 2 compressors and 4 air-driven tampers for backfilling and compacting on jobs of similar size and type. The one-man-operated "80-W" did the complete job in less time than the 7-man crew formerly required on comparable jobs. "It's a great time saver," was F. M. Van Doren's comment on its performance.

On a previous job their Cleveland backfiller had saved them considerable time and money on a 12-inch water line trench, averaging approximately 6 feet deep, by its unique ability to backfill spoil deposited on a down slope on the far side of the trench, while simultaneously tamping it to the state of Virginia's rigid compaction specifications.

The "80-W" also does an outstanding job of side-crane work, lays pipe, pulls crossings, sets hydrants and valves, pulls sheathing, loads and unloads pipe, etc. Despite its ability to perform all these operations—and do an outstanding job on *each* of them—the "80-W" is easy to operate. The Van Dorens' operator learned to operate it with high efficiency after only two days training on the job.

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CLEVELAND

A. O. SMITH MAKES 3 CHANGES AT TOP OF PERMAGLAS DIV.

Three management changes in the Permaglas division, A. O. Smith Corp., have been announced.

J. H. Brinker, who has been corporation director of marketing, has become general manager of the Permaglas division.

J. H. Brinker

R. J. Shepherd

S. E. Wolkenheim, who was Permaglas general sales manager, succeeds Mr. Brinker, in Milwaukee, as director of marketing.

R. J. Shepherd, manager of water heater sales for the division, now is general sales manager.

KITCHENS-LAUNDRIES TO BE FEATURED AT AGA CONVENTION

A parade of dream kitchens and laundries from the pages of major women's magazines will be exhibited at the combined American Gas Association—Pacific Coast Gas Association convention in Los Angeles, October 17-19. These kitchens and laundries, under joint sponsorship of the host company, Southern California Gas Co., and AGA will be in the new Statler Hotel, during the entire AGA convention.

These magazines already have designated one or more kitchens and laundries especially for the convention: *American Home, Better Living, Family Circle, Good Housekeeping, McCall's* and *Parents'*.

SGA ACCOUNTING SECTION PLANS YEAR

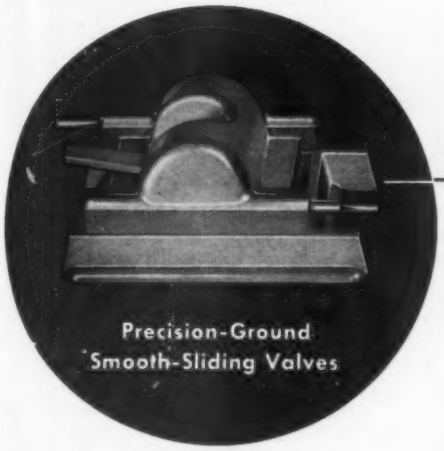
The vice-chairman of Southern Gas Association's accounting section, F. K. Macdonald, Texas Illinois Natural Gas Pipeline Co., was sponsor of the accounting management conference in New Orleans, March 17-18. Thirty-five representatives of 25 companies attended.

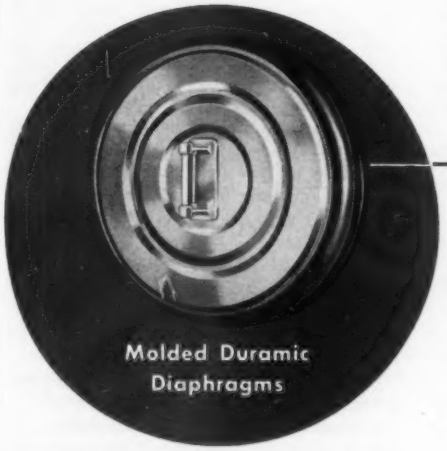
The 2 main purposes of the conference were to plan the activities of the SGA accounting section for the 1955-56 Association year, and to discuss various accounting problems of member gas companies.

It was determined that the accounting section would conduct 6 round-table conferences. Among the topics selected were transmission and production accounting, property accounting, customer accounting, and distribution accounting. The dates, places, and chairmen of the round-tables will be announced later.

The New Orleans program was highlighted by a discussion and movie presentation, "Electronics for Accounting and Business," by John Pardee, Arthur Andersen & Co.

2 MORE IMPROVEMENTS TO GIVE YOU TROUBLE-FREE SERVICE





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The advances toward "sustained accuracy at lower cost" in Tinned Steelcase Meters shown here were developed after years of extensive research.

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2. *Molded Duramic Diaphragms,* for installations requiring composition diaphragms, provide years of trouble-free, accurate service and minimum maintenance. American Duramic Diaphragms have been tested thoroughly in laboratory and field installations.

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Northwest Utilities Discuss $70-Million Programs at Meeting for Byrne, New Seattle Gas President

Walter S. Bryne (L), president, Seattle Gas Co., welcomed to his new job by Charles M. Sturkey, executive vice president.

WALTER S. BYRNE, newly-elected president of Seattle Gas Co., was greeted by Charles M. Sturkey, executive vice president, as he stepped off his plane from Omaha, where he had been general manager, Metropolitan Utilities District. Mr. Byrne assumed his new duties March 15.

The welcome to Mr. Byrne was extended March 21, at a luncheon-meeting attended by 34 executives of 7 gas utilities in Washington, Oregon, and British Columbia. The group discussed plans to spend $70-million during the next 5 years in the conversions of their systems to natural gas.

Mr. Byrne directed domestic conversion to natural gas in Omaha, while he was general manager of Metropolitan Utilities District, and will manage the $13,500,000 expenditure to expand the Seattle Gas system.

His record as a utility operator was lauded by Morris E. Jacobs, president, Bozell & Jacobs, Inc., Omaha, national advertising and public relations firm, and host at the luncheon.

"If Omaha had seached for its finest tribute to pay Seattle, we could have found no larger fund of proved ability nor a warmer and more friendly man," Jacobs said of Mr. Byrne. "His is a record to which Seattle can look with confidence."

Mr. Jacobs told the Northwest utility executives that Mr. Byrne had increased the Omaha gas plant in service by $14-million, installed 216 miles of mains and added about 20,000 customers after natural gas arrived.

Allen Peyser, president, Washington Gas & Electric Co., who is discussing merger possibilities with Seattle Gas, said his company plans to invest about $6-million for expansion.

G. H. Gueffroy, president, Portland Gas & Coke Co., said his company expects to spend more than $16-million.

British Columbia Electric will spend approximately $18-million for conversion, installation of new distributing systems in a number of communities, and for a lateral to connect with the Westcoast Transmission line.

Stewart Matthews, president, Cascade Natural Gas Co., said about $11-million will be spent to serve 19 Northwest communities. Cascade also will install new systems in several newly-franchised cities.

Spokane Gas and Fuel will spend about $5-million for service extensions.

Including expenditure for a pipeline from the Peace River fields of Northern British Columbia and Alberta, which will supply gas to Pacific Northwest Pipeline Corp., total investment in natural gas development for Northwest will be close to $500 million.

WINSLOW HEADS NEW KOPPERS DEPARTMENT

Formation of a company-wide marketing department under the direction of Ralph Winslow, vice president, has been announced by Koppers Company, Inc.

The new marketing department will include sales management, market and economic research, sales personnel development, sales promotion, advertising and public relations sections.

Mr. Winslow joined Koppers in 1945, became manager, public relations department, in 1947 and was elected a vice president in 1954. As public relations manager, he has been in charge of the company's promotion, advertising and public relations.

PENN INSTR. A BURGESS-MANNING DIV.

Penn Industrial Instrument Corp., Philadelphia, has become a division of Burgess-Manning Co., Libertyville, Illinois, and Dallas, Texas.

Penn instruments will continue to be manufactured at the Philadelphia plant. William C. Bennett, formerly president of Penn has been elected vice president and director of Burgess-Manning and will manage the new division. William Melas formerly vice president of Penn was elected a director of Burgess-Manning and will continue in charge of engineering and development. George D. Keller continues to be in charge of sales and will be assisted by William Braun.

FEDERAL Power Commission

OPERATING REVENUES AND INCOME — DECEMBER 1954

Operating revenues of natural gas pipeline companies totaled $166,399,096 in December 1954, and $1,599,923,699 for the 12-month period, representing increases of 15.3% and 14.0% over revenues received in the like periods a year earlier.

Utility operating income for December amounted to $24,702,063, slightly lower than in the same month last year. However, for the 12-month period ended December 1954 utility operating income amounted to $251,959,555, an increase of 13.4% over the comparable 1953 period.

Net utility plant of the companies aggregated $4,053,422,619 at the end of December 1954, an increase of 8.0% in December, last year.

Net utility income for December 1954 was $16,003,757, down 11.4% from December 1953. For the 12 months ended December 1954 the net of $163,826,252 represented an increase of 7.1% over the comparable 1953 period.

Gas sales to other gas utilities for resale, the principal business of these companies, for the month were 544,832 MMcf, 12.1% over December 1953. Sales to ultimate consumers during this month were 108,518 MMcf, an increase of 5.9% over December 1953. For the respective 12-months period ended December 1954 percentage increases were 9.2% in sales for resale and 5.7% in sales to ultimate consumers.

MONTANA POWER AUTHORIZED TO IMPORT CANADIAN GAS

A presiding examiner of the Commission filed a decision, subject to review, authorizing Montana Power Co., to import from Canada up to 100 MMcf per day, with an annual maximum of 20 MMMcf. The authorization extends until May 1, 1974.

The gas would be imported from the Pakowki Lake area in southeastern Alberta, where it would be produced and gathered by Canadian-Montana Gas Co., Ltd., a subsidiary of Montana Power. It would be delivered to Canadian-Montana Pipe Line Co., another subsidiary, which would make delivery to Montana Power through existing facilities at a point near Whitlash, Mont., on the U.S.-Canadian boundary.

FPC, in February 1952, authorized Montana Power to import 40 MMcf daily and a maximum of 10 MMMcf annually from Canada, to be used exclusively by Anaconda Copper Mining Co. That authorization expires April 7, 1956.

Alberta Petroleum and Natural Gas Conservation Board recently issued a new 20-year permit authorizing the export of a maximum of 100 MMcf per day and up to 20 MMMcf yearly. An application for an export permit is now pending before the Minister of Trade and Commerce of the Dominion.

The presiding examiner dismissed a motion by coal and labor interests to dismiss Montana Power's application, after concluding that the proposed importation is in the public interest. He declared that "it seems self-evident that any reasonable augmentation of our limited domestic supplies is desirable unless clearly outweighed by damage to the public interest. No such damage is here shown."

DENIES MOTION TO DISMISS NATURAL GAS PIPE'S RATE APPLICATION

The Commission has denied a motion to dismiss an application by Natural Gas Pipeline Company of America for a $10,060,000 annual wholesale natural gas rate increase, and has ordered hearings to reconvene at a time and place to be set by further notice.

The motion to dismiss was made by Illinois Commerce Commission and joined in by City of Chicago. The motion raised the question whether, in view of the U. S. Supreme Court's decision in the Phillips case, fair field price provides a reasonable and proper basis for determining the proper cost to be reflected as an expense item in Natural's cost of service for the gas it produces.

FPC said that proper and reasonable allowance in cost of service for company-produced gas cannot be determined in advance of a complete and full record.

Natural's increased rates were suspended by the FPC last September, but have been in effect, subject to refund, since March 2.

AFFIRMS ORDER DIRECTING TRANSCON EXCLUDE FINANCING COSTS

The Commission, following a rehearing, has affirmed its order directing Transcontinental Gas Pipe Line Corp., to exclude from its gas plant accounts certain disputed financing costs totaling approximately $5,215,368.

TRANSCON AUTHORIZED TO EXPAND FACILITIES

The Commission authorized Transcontinental Gas Pipe Line Corp. to construct new facilities to increase deliveries by 93,234 Mcf per day.

The new facilities include 360½ miles of 36" and 30" pipeline paralleling sections of the existing systems; a total of 10,500-hp in 2 new compressor stations, and miscellaneous additions to existing stations. Total estimated cost is $48,205,000.

The construction will enable Transcontinental to increase deliveries to 36 existing customers, and to serve 6 new wholesale and one industrial customer. With the newly authorized sales, Transcontinental's total peak day requirements will be 694,997 Mcf, and peak day delivery capacity will be 697,692 Mcf.

The new customers which Transcontinental was authorized to serve are: Salem (N. J.) Gas Co.; City of Union, S. C.; City Gas Co. of New Jersey; City of Fredericksburg, Va.; New York and Richmond Gas Co.; and Natural Gas Co. of Western Carolina, at Anderson, S. C.

NATURAL GAS PIPE'S SUSPENDED INCREASE MADE EFFECTIVE

An order has been issued making effective as of March 2 a proposed $10,060,000 annual wholesale rate increase by Natural Gas Pipeline Company of America, provided the company agrees to refund any amounts subsequently disallowed by FPC.

DENIES HUMBLE'S REQUEST FOR REHEARING ON APPLICATIONS

The Commission denied a request by Humble Oil & Refining Co. for a rehearing on FPC's rejection of 10 applications for certificates authorizing sales of natural gas.

FPC rejected the certificate applications on the ground that Humble is not a party to the respective sales contracts involved, and also because "it is not apparent" that Humble has standing to file the applications.

Each of the rejected applications involves an arrangement whereby another producer, as operator of a unit, has authority to market Humble's proportionate part of gas produced from operating unit.

STATISTICS OF GAS COMPANIES

The Commission has issued the 1953 edition of its annual publication, "Statistics of Natural Gas Companies." The report provides information on 160 companies. During the year, however, 3 companies disappeared through merger, leaving 157 in operation as of December 31, 1953.

Copies of the new publication, bound in cloth, may be obtained from Publications Division, Federal Power Commission, Washington 25, D. C. The price is $5.00, the order number is FPC S-114. A 22-page summary of the report, at 25 cents per copy, will be available in late April.

FPC SUBPOENAS 4 PRODUCERS

Federal Power Commission issued an order for subpoenas directing officials of 4 independent producer companies to appear at hearings in the proceedings in which FPC ordered 14 independent producers to show cause why they should not be required to obtain permission before terminating deliveries to Texas Illinois Natural Gas Pipeline Co. The subpoenas also direct 3 of the officials to produce documents.

The subpoenas were directed at officials of Magnolia Petroleum Co., Socony Vacuum Oil Co., La Gloria Oil & Gas Co., and the Goliad Corp. Commissioner Digby dissented.

10,000 PRODUCER RATES PROCESSED

Substantial completion of processing of approximately 10,000 rate filings made by independent producers since the Supreme Court rendered its decision in the Phillips case was reported by Federal Power Commission.

The 10.000 rate filings include rates in effect as of last June 7, new services, rate changes, termination notices, and concurrence filings, the Commission said.

Gas Industry CALENDAR

APRIL

12-14 AGA sales conference, industrial and commercial gas, Hotel Statler, Boston.
12-15 AGA distribution, motor vehicles and corrosion conference, Netherland Plaza, Cincinnati.
14 GAMA 6th annual range conference, Hotel Pierre, New York.
18-19 AGA residential section, eastern natural gas sales conference, Hotel Wm. Penn, Pittsburgh.
19-20 PCGA distribution conference, Phoenix, Ariz.
19-21 Southwestern gas measurement short course, Univ. of Oklahoma, Norman.
25-27 Midwest sales conference, Edgewater Beach Hotel, Chicago.
25-27 Electric and gas utility accountants, national conference, Conrad Hilton Hotel, Chicago.
27-29 AGA research and utilization conference, Hotel Statler, Cleveland.

MAY

1-4 LPGA convention, Conrad Hilton Hotel, Chicago.
2-3 PCGA transmission conference, Palm Springs, Calif.
2-6 AGA industrial gas school, Hotel Wm. Penn, Pittsburgh.
5-7 Florida-Georgia Gas Association, annual management conference, Key Biscayne Hotel, Miami.
9-10 AGA gas supply, transmission, storage conference, Hotel Wm. Penn, Pittsburgh.
9-13 National restaurant exposition (AGA exhibit), Navy Pier, Chicago.
12-13 PUAA, Sheraton Hotel, Chicago.
16-18 SGA 47th annual convention, New Orleans.
17-19 Pennsylvania Gas Association, Pocono Manor, Pa.
18 PCGA non-residential sales clinic, Los Angeles.
19 PCGA residential sales clinic, Los Angeles.
23-24 AGA residential section, N.Y.-N.J. sales conference, Hotel Commodore, New York.
23-25 AGA chemical, engineering, manufactured gas production conference, Hotel New Yorker, New York.
31 AGA board of directors, The Homestead, Hot Springs, Va.

JUNE

1-3 SGA short course in gas appliances, University of Tulsa, Tulsa, Okla.
5-9 Canadian Gas Association, annual meeting, Sheraton-Brock Hotel, Niagara Falls, Ont.
9-10 Natural Gas and Petroleum Association of Canada, Royal Connaught Hotel, Hamilton, Ont.
27-28 Michigan Gas Association, Mackinac Island, Mich.
28-July 1 American Home Economics Association, Minneapolis.

JULY

18-Aug. 13 Southeastern Gas Association, short course in gas technology, Raleigh, N. C.
18-22 Western summer appliance market, Merchandise Mart, San Francisco.
29 AGA board of directors, Denver.

AUGUST

15-Sept. 10 Southeastern Gas Association, short course in gas technology, Raleigh, N. C.
29-31 Appalachian gas measurement short course, West Virginia University, Morgantown.

SEPTEMBER

7-9 Mid-West Gas Association, school and conference, Iowa State College, Ames.
9 New Jersey Gas Association, Hotel Monmouth, Spring Lake.
11-13 INGAA, annual membership meeting, Jasper Park Lodge, Jasper National Park, Alberta.

OCTOBER

12-14 GAMA annual meeting, El Mirador, Palm Springs, Calif.
17 AGA board of directors, Los Angeles.
17-19 AGA-PCGA joint-convention, Los Angeles.
17-21 National metal show (AGA exhibit) Philadelphia.
24-26 Pacific Coast restaurant convention, Biltmore Hotel, Los Angeles.
24-27 National Association of Railroad & Utilities Commissioners, Asheville, N. C.

NOVEMBER

7-11 National Hotel Exposition, Kingsbridge Armory, New York.
13-18 ASME, Congress and Hilton hotels, Chicago.
14-17 API, San Francisco.
28-30 SGA advisory council and management conference, Point Clear, Ala.

JANUARY 1956

23-24 Industrial Heating Equipment Association, LaSalle Hotel, Chicago.

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MARCH 1956
12-16 National Association of Corrosion Engineers, Hotel Statler, New York.
19-21 Midwest Gas Association, Omaha, Neb.
22-23 NEGA, annual meeting, Hotel Statler, Boston.

APRIL 1956
4-6 AGA general management section, conference, Conrad Hilton Hotel, Chicago.
16-18 National Conference of Electric and Gas Utility Accountants, Hotels Biltmore and Commodore, New York.
16-19 AGA sales conference on industrial and commercial gas, Hotel Roanoke, Roanoke, Va.
19-21 GAMA annual meeting, The Greenbrier, White Sulphur Springs, W. Va.
23-25 SGA 48th annual convention, Dallas.

MAY 1956
7-10 AGA distribution, motor vehicles and corrosion conference, Congress Hotel, Chicago.
7-11 National Restaurant Association, convention and exposition, Navy Pier, Chicago.
10-11 AGA gas supply, transmission and storage conference, Conrad Hilton Hotel, Chicago.
16-18 AGA chemical, engineering and manufactured gas production conference, Philadelphia.

A quickie review . . .

GAS APPLIANCE ADVERTISING

BETTER HOMES AND GARDENS: April

CALORIC RANGE. This ½-page black-and-white ad puts its emphasis on built-in cooking units and the illustration has "life" in the form of a homemaker in the kitchen. Reader-action is stimulated by an information coupon.

DELCO-HEAT. Here is a 2-page black-and-red spread that, very properly, includes substantial detail on home heating to help homeowner tie his problem to the company's equipment. Again, a coupon is included for convenient request of additional information.

FLORENCE RANGE. Top-of-stove heat control is the feature of this one-page black-and-white ad with a homemaker quoted in the headline: "No woman ever cooked like this before." Details of the range are pictured, showing Harper-Wyman burners, swing-out broiler and rotating broiler.

GENERAL CONTROLS. Here is a tie-in with equipment and appliance manufacturers, in a dramatic-sized showing of a control and hand adjusting it. The simple copy of this one-page black-and-red ad emphasizes convenience and economy of automaticity.

MAGIC CHEF RANGE. This believable 4-color ½-page ad shows action around the range and a close-up of an attractive plate of food. The use of currently-popular pink as a ground color, with black type over it, comes off effectively.

PERMAGLAS WATER HEATER. A. O. Smith combines an attractive figure, the new blue-front automatic heater, with lavish use of white space and short copy to come up with a stop-read 4-color full page ad.

RHEEM WATER HEATER. Dominating use of deep blue of the Rheem glass coating give this 2-page spread in 4 colors a hard-to-pass character. Under the head, "This is the frit", Rheem shows and tells the story of its lined water heaters, with a figure in the illustration for the valued human element.

TAPPAN RANGE. A strong use of green gives this page homemaker-attraction, to present the new Greenbrier model. Automatic operation, 4-in-line burners, broiler and oven are featured in sub-illustrations.

UNIVERSAL RANGE. "Two ovens in a 36" gas range" is the high-spotted headline of this ½-page black-and-white ad. Cribben & Sexton also lets BH&G readers know that they have space heaters, incinerators and clothes dryers — *all gas.*

VICE-PRESIDENTS NAMED

Appointment of Charles M. Hickey, Sam S. Emison, and Jennings C. Crowder as vice-presidents of Consolidated Chemical Industries, Inc., has been announced.

Mr. Hickey will continue as manager of manufacturing, southern division, Houston, Texas. Mr. Emison will remain as sales manager, southern division. Mr. Crowder will move to San Francisco and take over the newly created position of general manager, New England and Pacific divisions.

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